



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

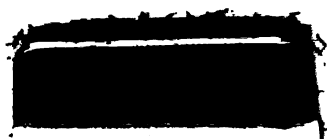
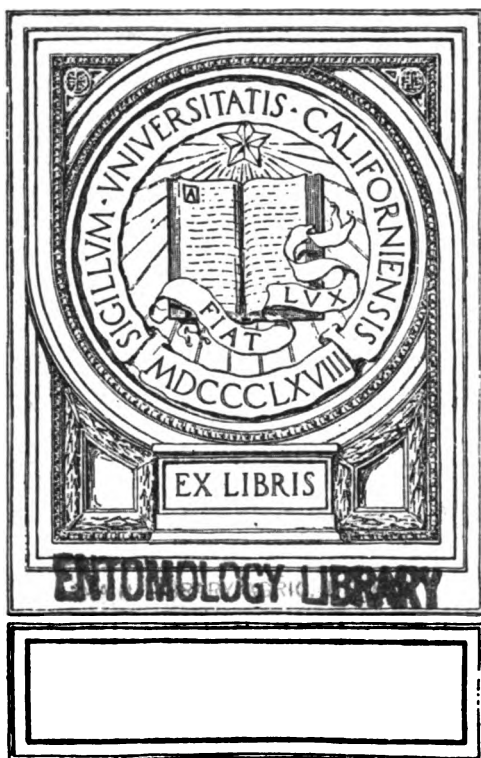
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



Digitized by Google

MAIN LIBRARY AGRIC. DEPT.

SF521
A5
v. 7 no. 7-
v. 8 no. 6

ENTOMOLOGY LIBRARY

UNIV. OF
CALIFORNIA

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VII.

JANUARY, 1872.

No. 7.

Non-hatching Bee Eggs.

Translated for the American Bee Journal, from the
"Bienenzeitung."

Since I first stated, in my essay on alternation of generation, in "*Parthenogenesis in Insects*" (1858, page 62), the fact, based on an observation made by Mr. Hücke, that there are queen bees whose eggs, though regularly brooded, fail to hatch, the number of such instances noticed by others has become so multiplied that the Baron of Berlepsch—who once, in confident conviction to the contrary, boldly offered to give twenty of his finest Dzierzon hives stocked with Italian bees, for one such queen—has felt himself constrained to devote a special paragraph to these "addle eggs," in the new edition of his celebrated work on Bees and Bee-culture (1865, page 86).

In accordance with previous observers, Berlepsch infers, from the absence of brood, that the eggs are in reality addle. He assumes that they remain entirely without any advance towards development, though brooded; and looks for the cause of this in the defective constitution of the mother, in consequence of which she has lost, either wholly or partially, the ability to produce eggs having the germ of vitality. Of the same opinion is Professor Von Siebold, as is shown in a communication from him in a late number of the *Bienenzeitung* (1871, page 171), wherein he speaks of the addle condition of bee eggs, though he was unable to detect anything abnormal either in the queen sent to him, or in her eggs.

I confess that I coincided in this view respecting the nature of the eggs in the instance referred to, till the autumn of 1868, when I had opportunities in rapid succession to investigate three cases of so-called *addleness*, and then found reason to change my opinion.

The first of these cases occurred in the apiary of Mr. Dörr, in Mettenheim. On the 23d of September, I received from him the following communication respecting it:—"For two months past I have been watching the oviposition of a queen bred this year, continually finding eggs in the cells, but never any larvæ, sealed or unsealed. Three weeks ago I examined the hive, and found, as I had found four weeks before

eggs, and eggs only. Inferring thence that a change of queen had taken place, I regarded these eggs as the first batch laid by the new queen. Since then, three weeks more have elapsed to-day, yet I found no trace whatever of brood; but, as before, eggs only. Under these circumstances the population of the hive having become much reduced, the area of oviposition is no longer large, yet I find in each cell in this area several eggs, and in some instances as many as five.* But I can readily see that always one of these eggs has been recently laid, because the larger number have already, by drying up, become shrivelled or shrunken—some being, as it were, mere shells. I would particularly request attention to the fact that oviposition appears to have proceeded regularly, for there always was one freshly laid egg in every such cell.—On the whole, I cannot account for the facts thus observed except on the assumption that this queen lays addle eggs only."

Mr. Dörr's kind offer to send me the queen and eggs for examination, was of course thankfully accepted; and I very soon received both, with an additional note from him, in which he stated that the queen was hatched on the 12th of July, when drones were plenty; and that she had been laying since the beginning of August, though no being, endowed with vitality, had ever issued from any of her eggs.

I found the queen, both externally and internally, perfectly normal and well-shaped. The ovaries and oviducts were richly stored with eggs in various stages of advancing maturity—those organs being still well developed for so late a period in the season. As in the case also, mentioned by Prof. Siebold, fertilization had taken place, and the spermatheca contained a dense mass of still mobile spermatozooids. Their dissection furnished nothing that threw any light on the subject; but the matter assumed a different aspect when I subjected the eggs themselves to investigation.

Even the first egg placed under the microscope, though still fresh and of the usual appearance, satisfied me that the assumption that these eggs were addle, was altogether unfounded. Instead of an amorphous yolk, it contained a perfectly formed embryo, with the usual external and in-

* In several of the cells of the comb sent to me, I found even seven or eight eggs.—Note, by Prof. Leuckart.

ternal appendages (even the amnion); so that, without further knowledge of the circumstances, the egg had to be regarded as normally endowed with life. And all the rest of the eggs were just like the first one examined, so far as their shrivelled state allowed me to form a judgment—most of them, however, being so shrunken that the embryo, as such, could not be exhibited.

The "addleness" of these eggs was consequently merely apparent. Their failure to hatch did not result from lack of inherent power of development, but from the simple fact that the embryo, formed entirely as all such embryos are, had not power to emerge from the egg. Neither the egg shell nor the amniotic sac showed any abnormal thickening, and the embryo itself was entirely normal. There was consequently no physical or mechanical obstacle to prevent hatching; and there remains hence only the assumption that the seeming addleness of the eggs resulted from the premature death of the embryonal germ.

What I have here stated respecting the Dörr case holds good also as regards two others, which were presented to me almost simultaneously for investigation. Here also the apparently addle eggs contained normally developed embryos. One of these cases, however, was of special interest, because by it was furnished the experimental proof that the embryos do not hatch, even when the eggs containing them are placed in other hives. This fact was communicated to me by Mr. E. Böttger, teacher, of Weissenberg, in Saxony, in a note, as follows:—"Last summer I had two cases presented to me, in which young queens laid eggs incapable of producing living larvæ. The first of these queens was found in a colony belonging to Mr. Schmidt, of Zwörst. She was killed and cast out by the bees two months later. The second occurred in a colony belonging to Mr. Fangthünel, of Hartingsdorf. She laid a vast number of eggs, in perfectly regular order, in thirteen different colonies in which we successively introduced her, and all of which proved to be lifeless. Eggs from other hives, and even drone eggs, were regularly hatched when inserted in any of the hives containing this queen. By repeatedly inserting brood combs containing eggs from other queens the population was kept up in the colonies with this defective queen."

As this case shows evidently, the cause of the premature death of the embryo germs must be sought for in the eggs, or rather in the mother which produces those eggs. But whether it will ever happen that the cause shall be discovered, is extremely doubtful. We know of analogous cases in human subjects, though not even plausible explanations of the occurrence have yet been furnished; and queen bees producing so-called addle eggs may be classed in the same category. Eggs truly addle—that is, eggs containing no embryonal germ susceptible of development, have not yet been found among those laid by queen bees.

LEUCKART.

[For the American Bee Journal.]

Rearing Artificial Queens, and their Value.

When I commenced Italianizing my bees, I laid down certain rules under which I would proceed the following spring. One of these was, to raise drones and queens so early in the season that the young queens would have no chance to mate with black drones. To get drones early, I wintered in nuclei and full hives, twelve virgin queens. All of these were got through the winter safely, but I lost seven of them the first few days after wintering out. From the five which were saved I succeeded in raising, at the lowest estimate, three thousand drones, that were flying as early as the 20th of April. I had succeeded also in raising more than a dozen queens hatched between the 10th and 15th of April. Every day that was warm enough for bees to fly, the queens as well as the drones appeared to be just as lively and active in their excursions, as in summer weather; and I, of course, expected that the queens would speedily become fertile. But I was doomed to disappointment. None of those queens became fertile until the 7th of May, when three of them commenced laying drone eggs, and soon appeared to be regularly fertile. At that time, however, drones had made their appearance from common stocks also.

Most of the queens that I reared so early, were small, did not prove to be very prolific, and were superseded the same season by the workers. When the queen cells in which they were hatched were built, no young workers had yet been hatched, to my knowledge; and bees could not yet gather pollen in the fields. I tried once or twice more to raise early queens, but always with poor success. I am now fully satisfied that, to raise prolific and large queens, a colony must have a large number of young workers, and must be supplied with plenty of honey and fresh pollen newly gathered in the fields. The colony must also be closely watched; all queen cells sealed before the third day after making the colony queenless, and all cells built after the seventh day, should be destroyed. If sealed too early, the young queens hatched from them will nearly always be small; if too late, such queens proved to be very unprolific with me, and were sometimes superseded very shortly after becoming fertile.

In my location it is early enough to commence breeding queens between the first and the fifth of May. During the months of May, June, July and August, good queens can be artificially raised, if the proper stocks are selected, well treated, and properly watched. No stock should be compelled to raise two sets of queen cells in succession. I always found the second lot inferior to the first; and as bees nurse a smaller number of royal grubs better than a larger one, they should not be allowed to build more than eight or ten cells. Queens reared at a time when little or no pollen is gathered, are usually smaller and less prolific than those reared with plenty of pasturage. Therefore, queens reared in the month of September are not near so valuable as queens reared in the preceding month. Queens

artificially reared are, in most instances, as good as natural ones; but not all of them. I will not deny that I think more highly of natural queens than of artificial ones; but we cannot always get them, when we want them, and many a stock would be lost if we depended exclusively on a supply of natural queens. Those queens, too, greatly vary in prolificness and longevity; and I must concede that I have, and have had, many an artificial queen that I preferred to natural ones.

I had written the foregoing article about ten days before the arrival of the last (December) number of the Journal, thinking it would be in time yet after receiving that number, I retained it; and I am now really glad that I did so, as this gives me a chance to comply with the request of Novice and say how I get my queen cells. But to satisfy Novice and other readers of the Journal that I have been breeding my queens in the same way for a number of years, I send you, Mr. Editor, one of my circulars for 1868, with the request to insert here what I said in it about queen raising:

RAISING QUEENS.

When I first commenced raising queens, I raised them on pieces of brood comb with eggs and little worms, which I had inserted into a little hive (nucleus) with three small frames 6 inches wide and 5 deep that were filled with comb and honey and a small lot of worker bees. This I found was a poor way. I now deprive a good colony of bees of their queen, let them build queen cells, and on the 9th and 10th day I cut out all of them but one and divide and insert into as many nuclei as I have queen cells, and then I either take bees enough from the hive I cut out the queen cells to start the nuclei, or take mostly young bees from another colony and keep them shut up until the young queen hatches, and then open them in the evening a little while before sun down, when scarcely ever any bees will return to the parent hive. In this part of the country it is useless to commence raising queens before the 1st of May. Scarcely ever any queens will get fertile before the middle of May. If they are fertile they may be introduced into large colonies.

To this I have to add that, during swarming time, I stock all my nuclei with queen cells built in hives that swarmed naturally; and that, in nearly every instance, I take the tested queens sent off, from full colonies that have natural queens. The twenty-five queens sent to Novice September 15th and 22d, 1870, were artificial *untested* queens that had just commenced laying and were not more than fourteen days old. They were, consequently bred at the end of August or beginning of September, or at a time when the best breeding season was over, and they could mate only with old drones artificially produced. If only three out of those twenty-five queens ceased laying before they became one year old, Novice had better luck with them than I expected. He might have had the very best of artificial or natural queens, and not fared better. It is my opinion that Novice and many other beekeepers should not delay ordering queens to a time when the best queens cannot be raised. Whether he will do better by ordering queens of

Mr. Langstroth or not, if he should order twenty-five *untested* queens so late as September 12th, I am unable to say; and I will not even report my own experience for fear that I might prejudice anybody against Mr. Langstroth.

If several of Novice's dark hybrid queens were more prolific than the pure ones obtained from me in the extra good season of 1870, it is not yet proved that they would have been the same in the poorer season of 1871. But I will concede that they were, and if so, he only experienced what numerous other correspondents of the Journal reported. I cannot think that Novice wrote his remarks about the twenty-five queens obtained from me, in a fault-finding spirit, as I have received a number of letters this summer, stating that the writers ordered queens from me, because Mr. Root recommended me to them. Only for fear that some of the readers might get a wrong impression have I written this explanation. I will only add that among the forty-three queens imported direct from Italy by myself, and successfully introduced in my own stock, were a small number that were very little prolific; and that all of them, save one, died in their second or third year, and that one only lived until this summer—having been only a very moderate layer for the first two summers.

A. GRIMM.

Jefferson, Wis., 1871.

[For the American Bee Journal.]

Queen Mothers and Improvement of Stock.

DEAR JOURNAL:—Much is said among beekeepers about queen fertilization in confinement, about providing pasturage, and about the relative merits of Italian and black bees, &c.;—all looking, we take it, to the increase of the honey crop, while comparatively little is said upon the topic which heads this article.

The fertilization of queens by selected drones, seems at best to make *very slow progress*; while some are ready to pronounce it a miserable failure. However desirable it might be, if practicable, we consider the wise selection of queen mothers, as of far greater importance. Any tyro can constrain bees to rear queens, but not *every* "Novice" can tell whether such queens possess real value, or not. Possibly every apiarian of experience has observed that there is a vast difference in the yield of different colonies in the same apiary, under the same conditions of management, pasturage, age of queens, form of hive, and strength of colony. Another fact, too plain to escape the notice of the observing beekeeper, that, in wintering, some colonies consume twice the amount of stores that other colonies of the same working force do, whether wintered in special depositories or on their summer stands. Hence we conclude there is a difference in different colonies of the same variety of the hive bee. There are desirable or objectionable qualities observable in every colony. It should be the aim of the breeders

to breed for the desirable and to breed out the objectionable features of his stocks. When this is done the "coming bee" will be one of large producing qualities, beautiful in appearance, amiable in disposition, not a large eater, nor yet an enormous breeder. The large eaters are not the large producers, neither do I find the slightest relation between irritability and industry; often the crosscast colony being the poorest workers. This is equally true, whether among blacks or Italians. In my earlier experience in breeding the Italian bee, I supposed that the queen that was large, yellow, and very prolific, possessed all the requisite qualities for a suitable queen mother, provided of course that she was considered pure Italian and her royal daughters were duplicates of herself. But I found by selecting queens of great fertility, I could produce a race of bees that would increase almost beyond limit, giving more of their labor to the rearing of brood, than the amassing of stores, and very much disposed to swarm, issuing in times of scarcity of honey, being crowded out by superabundance of numbers. I account for this from the fact that it is the prevailing instinct of the bee to rear brood and amass stores. With some the former, while with others the latter trait prevails. Under box, log, or straw hive management of the black bee for ages past, the inclination to run to excessive brooding was no doubt kept in check by occasional poor honey seasons, when such colonies would perish of starvation. By our present system of management, with movable comb-hives, and breeding rather for increase of stocks than surplus honey, we do not get the most productive bees. When urging the matter of improvement of bees, I am met with this clincher—"bees are bees, creatures governed by instinct, and that instinct unchanged from what it was thousands of years ago." But, my dear sir, does your horse, your cow, your pigs, or your poultry, possess a faculty, higher than instinct? Yet who will say no improvement has been effected in these domestic animals, in the past twenty-five years." What dairyman would think of stocking his farm with those long-legged, slim-bodied kine that could trot a mile inside of three minutes? Or what pork-raiser would think of fattening a drove of those four-legged land sharks with protruding tusks, such as our fathers made bacon and sausage of thirty or forty years ago? (Unless, of course, they possessed the feeding apparatus figured so minutely in the April number of the AMERICAN BEE JOURNAL last spring!) No farm stock at present is more susceptible of improvement, or would yield more readily to the skilful hand, than the honey bee. So fully am I convinced of the vast field of improvement open to the apiarian of the present day, in the wise selection of queen mothers, that I will venture the opinion that the yield of honey might be at least doubled from the same number of colonies, and that without increase of bee pasturage.

In any apiary of a hundred colonies, some stocks will be found much superior to others. Let us step into such an apiary and select a few queen mothers. They must be from stocks that have come through the previous winter with

abundant stores, showing the workers not to be enormous eaters. The queens must not be less than one year old; still better if they be two or three years old, showing longevity, and no attempt ever made by the progeny of either to supersede her. I do not fancy the superseding breed, unless it be at a time when there is a manifest reason for such a procedure—as, for instance, the queen is approaching the sunset of a well-spent life. The workers must be beauties; less matter about the queen herself, on that point. "Handsome is that handsome does." The workers must be industrious; not loitering at home, when honey awaits them in field or forest; yet sufficiently cautious not to sally forth in unpropitious weather, to return no more. They must be amiable in disposition, when out of the hive, not volunteering an attack on the apiarian, his family, or visitors, when passing near the hive. They must be reasonably good wax-workers, and yet not disposed to run too much to fat. I have observed both of these extremes, at times too when such results could not be attributed to the *age* of the workers.

Beekeepers have been wont to ascribe the difference in the product of different colonies to the nature of the combs, some having too much drone comb; others, to the hive, it "had no moth trap." "Use my hive, and your swarms will be all productive!" I do not ignore the fact that there is often too much drone comb; nor that some hives are better than others. Yet these reasons do not give a satisfactory solution of the question. I present the subject of the improvement of our bees by the judicious selection of queen mothers, in view of the almost total failure of fertilization in confinement; and if we breed only from such queen mothers as I have indicated, a few years will rid us of all objectionable drones. It is a matter too of practical importance—just important to the extent that it does matter whether we get fifty dollars or fifty cents, each, as the profit of our colonies. In the laudable effort of our best apiarians to supplant the black bee by a superior kind throughout all this sunlit land of ours, it is not strange that breeding for superior excellence in that superior variety, should for a time be lost sight of, or receive inadequate attention, so long as the supposed standard of purity was maintained.

I believe a majority of breeders of queens have not only done the best they could under the circumstances, but have done it well. They have planted largely, but the present time is at hand. Let unpropitious queens be prepared for decent burial as soon as better ones are ready to take their places. Let our motto be *improvement*, onward and still onward; if we would reap the best results in the fascinating pursuit of bee-culture.

In conclusion, Mr. Editor, allow me to express the hope that friend Gallup may be able to see the "reason why" not all queens of equal purity are suitable queen mothers; and that to maintain the Italian as a "fixed race" is not alone sufficient for our purpose.

W. J. DAVIS.

Youngville, Pa., Dec. 1871.

[For the American Bee Journal.]

Light Wanted.

MR. EDITOR.—I wish, by your permission, to put another question through the Journal, for solution. It is this—Can a pure Italian queen, whose progeny for the first few weeks all show the *three yellow bands distinct*—thus being purely tested, sent off, and introduced into another colony—afterwards produce workers, half black bees, and the rest having only one and two bands? Or, in plainer words, can a pure queen, tested pure, afterwards produce hybrids? If any of your readers know of such cases, will they please communicate them to the Journal?

On July 11th, I shipped *three tested* queens, to a gentleman out west. July 18th, he writes “queens arrived safe, caged and put in the hives to remain forty-eight hours.” The next letter was to this effect—one queen died in the cage; the other two are at liberty.

August 14th, he writes—“one of them shows fine workers in their daily play; but the other does not yet give very pretty workers, being too dark colored.” Again, August 18th, he writes—“I have just opened the hive in which the queen is, that produces the dark colored workers, and find she is giving about three-fourths black bees, and the other fourth one and two banded hybrids. It is now one month and six days since I set her at liberty in the hive.”

Now upon the receipt of the letter of the 14th, I know that there had not appeared a hybrid bee in either of the stands, for I had been daily among the hives. But, to be sure of no mistake, I went to my books to see if I was not right in the number of the hives, 36, 64, 68, from which I had taken the queens. I then opened each hive, examined carefully, and could not find a two banded bee in either of them, much less a black bee. I then, August 22d, wrote to him that he must be mistaken in having the same queen he got of me.

He answered on the 26th, “I know she was not killed in the first fifteen days after she was put into the stock, as she was there to be seen, and no queen cells were made in that time. Hence she could not be superseded by a black queen. If she has since then been superseded, it has been by a queen raised from her own brood and mated with a black drone. Now in the first fifteen days of her existence in the hive, I opened it as many as three times, and found the facts as stated above.” Again, August 28th, he writes, “Since writing you on Saturday, I have again examined that stock of bees, and begin to find an occasional three-banded bee. If she left good stock with you, it will certainly appear here, if she was perfectly fertilized.”

On the receipt of this last letter, I again carefully examined the three hives mentioned above, with the same result as before—not an impure marked worker in either of them. I felt satisfied I had sent him *purely tested* queens; but as he was not satisfied, as was clear from his letters, I sent him another queen, September 12th.

Now, to this day, there has not appeared a hybrid bee in either of the above stands. Hence

one of two things must be true. Either the queen got of me was superseded, or if she was not, she produced hybrid workers after being removed from her stand here—a case I do not recollect ever hearing of. Some may try to explain this case, by saying the queen met another drone, after being removed. I do not believe a queen is ever impregnated but *once and for life*.

The above case is a strange one to me, for if true that a queen, after producing purely marked workers for the first few weeks, can afterwards produce hybrids, then how can any breeder be certain that the queen he is sending off is pure? I was as certain of the purity of these queens when I shipped them, as I ever was of any queen; and after I had shipped them off, had I discovered within three weeks a single black bee with a two banded bee in either of the stands I took the queens from, I would have been satisfied that I had sent a bad queen. But as no such sign was discovered and has not been even to the present time, I can give no other explanation; but leave this for your readers, who may know of such cases, to explain.

R. M. ARGO.

Lowell, Ky., Nov. 22, 1871.

[For the American Bee Journal.]

Cross-Bred Bees.

In the October number of the American Bee Journal, there is an article under the caption of “*The Coming Bee*,” upon which I wish to offer a few thoughts. I do so the more freely, because the writer requests any one who may have had experience with the kind of bees he describes, to report. I do not know what special qualities he may have found in bees less than half Italian; but my observation of that kind of bees, has given me a very poor opinion of them.”

I have a number of colonies, the progeny of pure Italian queens fertilized by black drones. These I have found to be but little more inclined to sting than pure Italians. One of them, in fact, is as good natured as any bee I ever saw. They rarely if ever attack any one, when the hive is not disturbed; and I have extracted the honey from their combs, and have opened the hive many times for other purposes, without their manifesting anger. Other colonies of half-bloods are a little more belligerent than this one, but none of them are as much so as black bees generally are. I am aware that half-bloods have a bad reputation for ill nature, but as far as my observation extends they do not deserve it.

I had a colony whose mother I thought was pure, and they were terribly cross. It was nearly impossible to smoke them into submission. They would obstinately refuse to fill themselves with honey, and as soon as the hive was opened, they were ready for battle. But on close inspection of the progeny of the mother of this queen, there was found to be in them a dash of black blood. So these very cross bees were less than half Italian. I have had other colonies less than half Italian, and have found them to be

invariably more belligerent than the first cross; and I have failed to perceive in them any superior qualities which the pure Italians do not possess in larger measure.

I have some curiosity to know how Mr. Wright has ascertained that his mongrel race are greatly superior to the pure Italians in their range of flight and acuteness of scent! I have several colonies now, a majority of which are somewhat less than half Italian. They have received pure Italian queens this fall, and within a few days the pure Italians in those hives have been bringing in loads of pollen, procured somewhere, I know not where nor from what, while only now and then does one of the mongrels bring in anything; and yet the latter outnumber the former perhaps five to one. This fact (and it has been ascertained by careful observation), would seem to place the pure Italians ahead in acuteness of scent or range of flight, or in something equally important. If Mr. Wright, by some lucky accident, has hit upon a cross which possesses superior qualities, which qualities can be perpetuated, I shall be glad to know and acknowledge it; and will be glad to procure a queen of him. But I apprehend that he will find that he has been hasty in his conclusions. It may be well for him to continue his experiment in that direction, and report results of more extended observation.

M. MAHIN.

New Castle, Ind., Nov. 2, 1871.

[For the American Bee Journal.]

Introducing Queens.

Since I commenced to raise queens I have tested many methods for introducing them to full colonies. Last season I introduced a good many queens successfully in every case, in a simple and easy way; and I have no doubt others can do it equally well. My new method is this: Remove the queen from the hive to be re-queened (and it matters not what kind of hive the bees are in—whether with frames, or without frames). Three days later, fumigate all the bees with tobacco smoke, or wet them down with sweetened water, scented with essence of peppermint. Then introduce the queen at once, and she will be kindly received. Remember, the time for leaving the hive queenless is *three days*, and *not* longer, while the hive contains brood. As soon as the queen is introduced the bees will cease to work upon the queen cells, and none of them will be capped over. In a few hours after the queen is introduced, eggs can be found in the cells.

I introduced a few queens last season, without first removing the queen from the hive to be re-queened. I cannot recommend it as a safe way in all cases; but perhaps by giving this method a trial, a way for introducing queens safely, without first removing the queens, may be discovered. The theory is this: most beekeepers know that when a queen has been caged or removed from her colony three or four days, that she is then not more than half as large as she is when in a full stock, laying two thousand eggs

a day. Well, we should say that she is in good fighting trim, or much more so than a queen that is in a full stock, and laying her two thousand eggs per day, with her abdomen full of eggs, &c. Now, if we can introduce a strange queen (one that has not been in a full colony for three or four days) by cheating the bees, so that they will not know one queen from another, as I do when I introduce with tobacco smoke, we shall have two queens in one hive, and if they happen to meet in "mortal combat" in the course of a few hours after the queen is introduced, it will be seen at once that the strange queen has the advantage over her antagonist (the old queen), as her condition is much the best for fighting, she not being burdened with thousands of eggs.

I was successful in three cases. In the fourth case the bees kept the two queens for ten days, and the one introduced was missing one day when I looked to see how they were getting along together. The queens introduced had their wings clipped, and thus I could distinguish one from the other. I hope some of your readers will more fully test this plan next season. My plan for introducing with tobacco smoke was given in the Journal for July last.

It seems Alley is not the only man who makes a "smoke house" of his beehives and "vomits his bees to death" (See *Amer. Bee Journal* for November, page 98). I wondered why it was that your correspondents so misconstrued what I said about giving bees tobacco smoke. One of them recommended giving bees chloroform instead of tobacco smoke. Well, I am of the opinion that not many readers of the Journal took much stock in the chloroform concern. I have used tobacco smoke for twelve years in handling bees, and never saw any ill effects resulting from it yet.

I still have another way of introducing queens. It is not original with me. I got it from Mr. George S. Wheeler, of New Ipswich, N. H. Mr. W. removes the queen, and then crushes her, and daubs the queen to be introduced with the dead body of the one removed. He says he has been successful in every case. I tried it on one queen, and did not succeed. I found the bees going through the hugging process, and so removed the queen, and introduced her successfully three days later.

Many beekeepers have an idea that queens can be introduced only during warm weather. This is not the case. I introduced them late in October, and have introduced one since November came in.

H. ALLEY.

Wenham, Nov. 8, 1871.

[For the American Bee Journal.]

Eggs laid in Queen Cells by the Queens.

MR. EDITOR:—I see on page 139, December number of the Journal, a circumstance related by Mr. Grimm, of his seeing a queen withdrawing her abdomen from a queen cell and finding an egg in it; and also some editorial remarks in regard to the shape of the cell, &c

Now, I will relate to you and the readers of the Journal what came under my personal observation lately: Some time about the 10th of June I and my assistant, Mr. Meldrem, were looking over a hive of Italian bees, to see what condition they were in, as I wished to raise young queens from the mother of the colony, a very beautiful queen. We came to the comb she was on, and there were a number of queen cells on it. They had smooth, thin walls, and were in the condition they usually were when I found eggs in them. I told my assistant, who was then rather new at the business, that, judging from their appearance, the queen would lay in them in a day or so. Each one of them (six in number) was carefully inspected, and there was no egg to be seen in any. We watched the queen depositing eggs in worker cells, close by the queen cells. She laid quite a number, and then I turned the comb, so as to view the workers on the other side as to their markings, while my assistant still kept watching the queen. Presently he said, "Hold still, the queen has inserted her abdomen in a queen cell, and is laying in it." I did not turn the comb, for fear of disturbing her. Soon he said she had come out, and he pointed to the cell she had left. She was then close to the side of it, and there was an egg in it. I know my assistant to be a man of truth, and furthermore know there was no egg in any of the cells five minutes before. The cell she had laid in was about the usual length of queen cells after they are sealed over, and the diameter of the mouth was larger than that of a drone cell. I could see no difference between that and the other five without eggs. I thought at the time, where does the compression theory come in? I kept watch of the cell, and it was sealed over in due time after the larva had hatched, and the young queen is now in my yard, a very prolific one. The old one I let a friend have, after a good deal of persuasion, as he had accommodated me many times. Now, the compression theory may be correct, yet I have seen queens so often laying in worker and in drone cells not over one-eighth of an inch in depth, that I am inclined to doubt it. I cannot see either why a queen should be misled to lay in a queen cell, as swarming is the way ordained by the Creator of all things for bees to "multiply and replenish the earth." As the old queen leaves with the first swarm, it seems necessary that some way should be left for the remaining bees to secure another royal mother. Neither does it necessitate that the young queen should be a "rival or natural enemy," for in all cases that have come under my notice when, from scarcity of forage or other causes, swarming was postponed, the workers tore open the cells and destroyed the young queens. Only in cases of superseding are the young queens allowed to hatch, and then frequently the young and the old queen remain peaceably in the hive, and even on the same comb, until death by old age takes away the mother.

G. M. DOOLITTLE.

Borodino, N. Y., Dec. 5, 1871.

☞ According to the foregoing, and the previous communication of Mr. Grimm, given in our

last number, we may assume that queens do, at least occasionally, lay eggs in royal cells. But then comes up the question, if those eggs are suffered to remain there till hatched and the larvæ be then nursed to maturity, what will the product be—queens, or drones? Is it certain, also, that eggs laid in such cells by queens, or the larvæ springing therefrom, will be suffered to remain there and mature, after the workers discover their true character? Leaving out of view altogether, for the present, the queen's ability or inability to impregnate the egg deposited by her in a queen cell, may we not inquire whether she has the physical ability to place and attach an egg properly in such a cell? And may not instinct impel the workers to discard and throw out of them all eggs not found properly placed and attached, replacing them by others of their own choice and selection? Let the bearing on some of these points, of the facts stated in the ensuing article by Mr. Hewitt, be duly considered, before hasty conclusions are drawn *pro* or *con*. In the case there related, the workers were the agents, both in inserting the eggs in and in removing them from the queen cells, as circumstances existing at the time required or prompted them to do. And as, in each of those instances, they evidently proceeded in accordance with what, humanly speaking, we might call the dictates of sound judgment, may we not ascribe to them, in other instances also, impulses prompting them intuitively or instinctively to the course which the law of their existence demands and prescribes?

Furthermore, queens undoubtedly lay eggs in very shallow cells. But has it occurred to the observer to inquire what, if allowed to remain there and the larvæ hatched therefrom be nursed to maturity, such eggs will produce? When laid in rudimental, shallow cells, are they not usually discarded and thrown out by the workers, if this do not happen at a time when they are naturally predisposed to tolerate and cherish drone brood? And if the eggs so laid chance to be retained, and are properly brooded and the larvæ nursed to maturity, will the product be workers or drones? We know of only a single occurrence in point; but the issue there may indicate what is ordinarily to be looked for as the result of such contingencies. A few years ago a bee-keeping friend set a top box having glass ends on the hive of one of his most populous colonies, whose queen was remarkably prolific. Within the box were fastened strips of new worker comb, to allure and guide the bees, which at once took possession and went to work, sedulously building worker cells and storing honey in them nearly as rapidly as they were built—many of them being then less than half finished. When these combs were extended nearly to the bottom of the box, the queen happened to find her way into this upper story, and laid eggs in such of the rudimental shallow cells near the apex of each comb as still contained no honey. Then finding no further call or room for her services in that quarter, she withdrew and recommenced oviposition in the main hive below. Observing the eggs in the shallow cells our friend's curiosity was excited, and he closely

watched the ulterior proceedings and awaited the issue. The workers did not remove or cast out those eggs (this was in the month of June), but brooded them till hatched and nursed the larvæ, extending and slightly widening the side walls of the cells, in due time sealing them with *conceal* caps; and finally there issued from them several dozen of *small drones*—such as are usually bred in *humped* worker cells—as the result of that demonstration. Hence, reasoning from analogy, while conceding that queens do not unfrequently lay eggs in royal cells, may we not claim—till direct, conclusive evidence to the contrary is furnished—that those eggs are either discarded and cast out and replaced by others, under the auspices of the workers; or if, in rare cases, hatched and nursed, produce *drones*—usually *still-born*, or prematurely perishing in the cell.—ED.

[For the American Bee Journal.]

Eggs in Queen Cells.

MR. EDITOR:—Having read in the December number of the American Bee Journal an article from the pen of Adam Grimm, and your comments on the same, in regard to the depositing of the egg in the queen cell, I have concluded to relate a case that came under my notice in the summer of 1860. One day during the swarming season several swarms came off in quick succession. One alighted on the body of a dead plum tree, and being hurried, I was somewhat rough with them, and suppose I injured the queen, but I got it into the hive and carried it to a stand. Immediately afterward another swarm was hived, and placed near the one spoken of, after which but little notice was taken of them till the eleventh day. On that morning I found that the bees after building some combs in the first hive had nearly all deserted it, and found the queen lying dead on the ground in front. The deserters had joined the other swarm, and after filling the hive with comb and brood the bees had passed through a crevice in the honey board and were building in the upper chamber, from which I immediately removed them and put on boxes. In the afternoon of the same day this colony swarmed. Nearly all the bees left with the swarm, and flew directly to a tree in the woods. After returning from following the runaways, I opened the hive, and on the edge of one of the combs I found a cluster of four queen cells. I examined them carefully. There was no egg in either of them. The next morning I opened the hive again, and there was an egg in each of the four cells. About the middle of the day, as there were so few bees in the hive, I added to it a very small swarm having a queen. I looked again in the evening, and the four cells were again empty. This is conclusive evidence to me that, in this case, the eggs were placed in the cells after the queen left the hive, although they (the cells) were built while she was in it. Now, if in some cases the workers transfer the eggs to the queen cells, is it not more than probable that they do it in all cases, whether the queen is present or not?

Previous to this occurrence I had read Langstroth's work, in which your theory in regard to the impregnation of the egg is given, but was not able to account for the sex of the queen, if the egg in the queen cell is deposited there by the queen mother. Since then I have no hesitation in endorsing your theory in regard to pressure producing impregnation.

I have owned and handled bees for more than twenty years; have used the movable comb hive since 1858, and have been a reader of the Journal for the last six months.

MILTON HEWITT.

Perryopolis, Ohio, Dec. 12, 1871.

☞ The foregoing communication may serve to throw light on an interesting problem in bee-culture. The facts stated have not, we believe, been remarked before by any observer, and attention being now drawn to the matter, we trust it will next season be made a subject of careful investigation. The insertion and subsequent removal of the eggs is of itself a curious circumstance, and is probably significant. Future observations may enable us to trace its bearing on the production of queens. Observers, however, should constantly bear in mind that the object of inquiry is not to sustain or confute theory, but to elicit and establish truth.—[ED.]

[For the American Bee Journal.]

Italian Bees Not Working in Boxes!

In the second line of the second column, page 102 of the Journal for November, 1871, we find the above remark, reported as made by Mr. Marvin, of St. Charles, a prominent apiarian who keeps Italian bees, and, so far as I know, keeps them exclusively. Similar remarks we find on page 109.

As box honey is most convenient for transportation to market, and fetches nearly double the price that extracted honey does, this would really be a grave charge, if it had any foundation. When I stopped selling in the spring, this year, I had only two hundred and ninety (290) colonies of bees left. Eighteen of these were queenless or had drone layer queens, and five of them became so weak that I united them with other weak stocks. A number of strong stocks were weakened in May and June, by taking bees from them to start over one hundred nuclei. These two hundred and sixty-seven (267) colonies increased to six hundred and forty-four (644), and gave nine thousand nine hundred and forty-six (9,946) pounds of box honey. At the end of July we had estimated it as amounting to twelve thousand (12,000) pounds; but, owing to the great drouth, the bees replenished their stores in the main chamber from the contents of the boxes. This yield would no doubt have been increased by four thousand (4,000) pounds more, if we had not used the extractor, and five hundred (500) pounds besides from hives that had been weakened in starting the nuclei—increasing the average yield to fifty-four (54) pounds per

hive. I do not think that this looks like failing to work in boxes.

I had stocks that gave two sets full of box honey, equal to sixty-six (66) pounds, and a swarm besides. The best stock I had gave two swarms artificially made, and, with these swarms, one hundred and forty-six (146) pounds of box honey. I used fifteen frames full of comb to secure that result.

Doubtless those beekeepers who report a failure of Italian bees to work in boxes, have not the genuine Italian bees, such as we get direct from Italy. They have tried only the shining, beautiful, gentle Italian bee that does not sting, and is valued so highly by queen breeders, as it proves most satisfactory to purchasers, who consider it purest because of its beauty. I have repeatedly reported my experience with these bees in the Journal. I found the same fault with them, and will concede that they are not worth keeping, if kept to secure box honey. There seems to be one great fault with them. They cannot or will not produce wax as the black bees, the hybrids, or the *unrefined* Italian bees from Italy. They are usually very weak in the spring, and recover too late to do much. The same observation has been made by other beekeepers. During last summer I received orders for queen bees from two customers that had got queens from me two years ago. Both write that the workers reared from these queens were much crosser and not as fine looking as their other Italian bees, but proved to be very productive. "Send me another queen," says one, "of the same brood. I do not care how cross the bees may be. I want bees for business, and not for show."

I have been experimenting this summer with the *coming bee*, as a correspondent of the Journal names it, and will send a report respecting it in a short time.

A. GRIMM.

Jefferson, Wis., Nov. 1871.

[For the American Bee Journal.]

The Honey Extractor, Side Boxes, &c.

MR. EDITOR:—I see in your valuable Journal that some prefer the use of the honey extractor, to the entire exclusion of boxes. Others prefer boxes entirely, and will not allow even a place for the Extractor. Now, I take the ground that both are advantageous. I have one of J. L. Peabody's machines, which works to perfection. The machine is easily cleaned, and will last a lifetime.

I am frequently asked what proportion of the honey I can get from the comb. I would say, without fear of contradiction, that I can take ninety-five per cent. of old or ninety-eight per cent. of new honey from the combs, without injuring them in the least, and that with less labor than would be required to take the same amount in boxes. The honey when taken as it is gathered seems quite thin, and looks as though it might sour; but it gradually becomes thick until it has the same consistence as other honey, and as cool weather advances it becomes candied. At least

such is my experience. As to obtaining more honey with the Extractor than can be secured in boxes, I will give an instance to prove that such is the case. Quite late in the season (about the time basswood commenced to bloom) I made two artificial swarms, as near alike as possible: one black, the other Italian. On the black swarm I placed boxes, and used the Extractor with the Italians. Now for the result. I took from the black swarms (they filling their hive with comb and honey sufficient to winter) twenty-four pounds of box honey. The Italians have comb and honey the same as the others, and I have taken one hundred and twenty-four pounds of honey, making a difference of one hundred pounds in favor of the Extractor. Now, if we allow one half for the superiority of the Italians over the common bee, we still have fifty pounds, or twice the amount stored in boxes, in favor of the honey extractor. I admit that with us the extracted honey is not so salable as box honey, and therefore I prefer to produce both. H. Alley and some others recommend using boxes on the sides of the hive, and say these are a success; but with us, this season, they have proved otherwise. From the 25th of June to the 25th of July, the weather was quite cool, and within that time we had most of our surplus honey stored. The nights were very cool, and every morning the boxes placed at the sides of the hive would be found almost or entirely deserted, while those on the top would be well filled with bees. The consequence was that I obtained double the quantity of honey from the top boxes that I did from those placed on the sides. There was no difference in the size of the swarms that I could perceive. Had the weather been very warm, I presume the difference would not have been so great. Boxes holding about six pounds are those in general use here; yet they do not sell for as high a price as smaller ones holding two or three pounds, with but a single comb in each box; there is an objection to these small boxes, because the bees cannot keep up the requisite warmth in them, or work to so good advantage, unless they are constructed on the plan of those of Mr. Geo. T. Wheeler, of Mexico, N. Y. He has the boxes so arranged as to secure the required amount of animal heat, and still have each comb built true and even in each small box when separated. The glass, if any is used, is put on after the box is filled. There is also another advantage about these boxes, that is, the bees always finish the combs in the center of a large box first. All that you have to do is, to open the case of boxes, and so soon as any are full take them out and place empty ones in their stead. This stimulates the bees to greater activity, and overcomes the difficulty so often experienced of getting bees to work in a second set of boxes.

I am highly pleased with the American Bee Journal, and do not see how any beekeeper can do without it, even if not keeping more than two or three stocks of bees. Would it could come twice as often. Wishing you and the Journal much success, I remain yours,

G. M. DOOLITTLE.

Borodina, N. Y., Nov., 1871.

[For the American Bee Journal.]

Comb Honey, or Extracted?

MR. EDITOR:—As we are on our way home from the convention at Cleveland, and have to undergo the painful ordeal of "laying over" to-day at Louisville, Ky., we thought we could not spend the time more pleasantly in any way than in writing to the Journal. We attended the convention mainly to satisfy ourself by consultation with honey raisers from different sections of the country as to the comparative profitableness of raising box or extracted honey. Or, rather, we wanted to learn more particularly whether we could in the future stand a reasonable chance of selling, at a fair price, all the extracted honey we could raise—say at one-half the price that comb honey commands.

If the convention had satisfied us fully on this point, we, for one, should have imbibed our full share of the motto: "Be happy," that was displayed so conspicuously on the wall in the rear of our venerable and pleasant looking president.

We went to the convention strongly prejudiced in favor of running our apiary for extracted honey alone, as we have it arranged now for that kind of management; and as we commenced this year with only eight double hives and seventeen single ones, and increased the stock to thirty-six two-story and sixteen single ones, and obtained nearly two tons of extracted honey, we felt certain that in another year, we could increase the stock to one hundred colonies, and obtain ten thousand (10,000) pounds of honey. This, even at ten cents per pound, would pay handsomely. But where could we find a market for all this in bulk? And as there are hundreds of beekeepers who could, and perhaps will do the same thing, is there not danger of the business being overdone?

We all know that the fruit business has been overdone, and the days for fancy prices are gone. That business certainly offered no more inducements than the production of extracted honey does now, even at ten cents per pound. The fraud of adulteration could be lived down, if there were any reasonable prospect that the demand for extracted honey would nearly keep pace with the production. Another trouble is, that the low grades of West India honey must always come in competition with it.

It is generally admitted that we must build up a market for extracted honey; and as it is a maxim among fruit men, that "he that introduces a new fruit, must be its own buyer," we are a little afraid this might apply also to extracted honey. Above all things in the world, we dislike to have anything to sell which nobody wants to buy. We find that there is already a good market for comb honey almost anywhere, and in many cities, there is not half a supply. On our way to the convention and back, we talked with grocery men in Nashville, Louisville, Indianapolis, Cincinnati, &c., and find that they are all anxious for consignments of box honey, saying that they can get from twenty-five to thirty-five cents per pound for it. It sells very readily, and they say they never had so

large a supply but they could sell it all in a few days. But none of them wants to sell extracted honey. The complaint is that it goes slow; that their customers are afraid of it; that there has been so much adulteration, that most buyers of honey, who are not judges, prefer to buy and pay more for comb honey, for fear of being imposed upon. That many of their customers, when wanting a simple sweet, will generally buy molasses or syrup, because it is cheaper; while the wealthy classes, who wish it principally for show on the table, want nice white comb honey. These are about the facts which we have been able to gather from grocery men, and we hope that others, who have had more experience, will tell us if they are correct.

On the other hand, we have an exalted opinion of the speed and power of railroads; but especially is our impression lively as to their *smashing* ability; and in the distant future, we can see visions of smashed-up honey combs, which my little pets and myself have labored so hard all the year to fix up so nicely. And, saddest of all, to receive from our grocery man the discouraging intelligence that "your honey arrived very much broken, and leaking badly; and if we can sell it at all, we shall have to sell it very low."

If we could only sell extracted honey, how simple and nice it would be only to have a good honey extractor and a lot of good iron-bound whisky barrels, and we could ship to the end of the world, and the railroad men might tumble it about to their hearts' content, without damage to it or me.

How shall we send our honey to market? When shall we send it? Where shall we send it? To whom shall we send it? Upon this subject, we feel that our ideas are rather "tangled" up, and, like the drone question, it is as clear as mud to us. Brother and sister beekeepers, we want your advice on the *honey* question. The drone question we leave for Dr. Bohrer, and feel that he will be found ready and equal to the occasion, if not *superior* to it.

S. W. COLE.

Andrew Chapel, Tenn.

[For the American Bee Journal.]

How to make Super Hives.

The way commonly recommended by beekeepers, to get up super hives from which to extract honey during a plentiful yield, is as follows: Put a box of the same size as the lower or main box, without bottom or honey-board, after removing the latter from the hive that is calculated to be doubled, on the top of this, and removing a part of the combs from what is now the lower chamber, into the upper story—filling up both sections with empty frames, and putting a honey-board and cover on top of the upper section. By following this advice in former days, I found that it did not work according to my anticipations. It appeared to me as if the large amount of empty room all at once given, discouraged the bees, or so cooled-off their brood-nest, that they were unable to build much

comb, or leave the hive for the collection of honey. The bees built only a small quantity of comb, and at the end of the season had stored less honey than hives which I had only supplied with boxes. I have since adopted different methods of making double hives. One of these is the following: At the time when the honey harvest commences, or about two weeks previous, I select such stocks as I intend to use as double hives. I do not choose the strongest hives with very prolific queens, but such as are only of medium strength, because otherwise the colony might insist upon swarming, and thus spoil the game. For each of the hives selected, I have one of the super hives ready, into which I place all the brood and store-combs but one, of a colony that has already swarmed naturally—after brushing off every bee from those combs into the mother hive, which remains on its old stand, and into which the young swarm returns voluntarily, because the queen either would not fly, or is returned by the apiarian. By doing so, the super hive is at once filled with as many frames as I find it desirable to have in it; the colony gets a large access of workers from the daily hatching brood, and the cells are filled with honey as fast as the brood leaves, if the harvest is good. Only in a few hives the queens will continue to breed in these super hives, by retilling the middle combs with eggs. In little more than a week, the brood from the former queen will be sealed, and the combs can be emptied of honey without fear of throwing out the larva, or breaking the combs, as brood combs and old combs are much stronger than new ones. Of course, the apiarian does not increase his stock any by this method; but he will not fail to get a large amount of extracted honey from the super hive, and in good season, a good yield of box honey from his swarm, that received all the bees of the stock it came from, and one frame with brood besides.

A second method is the following: About a week before the honey harvest commences, I will unite as many hives as have swarmed *only once*, on the same day on which they swarmed, making one of two, treating one as the main hive, and using all the combs of the other to fill up the super hive, with all the bees of both stocks that remained in them after the swarms left. The new or double hive they created, I set on a new stand, giving the young swarms the stands of the old stocks. In this way I get an increase of one stock from two. The young swarms will be strong, supplying box honey in a good season; and the double hive thus formed will in a few days have no unsealed brood in any of the comb, and could all be emptied of honey, if found desirable. But I advise beekeepers to clear out the super hive only every three days, if full or nearly so. I have not had any double hive that was formed in this manner, give a second swarm, or that had not a large amount of honey stored. In the double hive, there will be a young queen in the fall. If desirable, such a double hive can be separated a little before the end of the honey season, and the queenless part supplied with a fertile queen, if increase of colonies is wanted; other-

wise, the combs of the upper story may be emptied and kept for future use, immediately after the main honey season is over, and the bees will store what little honey they still gather, in one hive, which is more desirable than to have it stored in two.

A third way to make double hives, is this: Put on a super hive, and furnish it with empty combs, if you have them. The colony will occupy those combs immediately, if strong enough. I use no honey-board between the hives, and put one or two combs or frames less in the upper story than in the lower, to keep the bees from sealing over the honey as quick as they would do if they had the full number of combs. I have had them lengthen the cells, so that some of the combs contained twice as much honey as they would otherwise do.

I have extracted honey from the main hive repeatedly, but find it much more difficult to remove the bees. There is usually brood in nearly every cell, and this is injured or thrown out, if not very carefully handled. After two years' trial, I recommend getting up double hives for the extractor.

And now, Mr. Editor, I hope that the foregoing will be plain enough to be understood by beginners in the bee business. I am well aware that I write nothing that is new to experienced beekeepers, and would not even have thought to write for beginners, if I had not received many letters of inquiry, that I got tired of answering and explaining separately.

ADAM GRIMM.

Jefferson, Wis., Nov. 25, 1871.

[For the American Bee Journal.]

Bee Hives.

MR. EDITOR:—The above caption is now one of the "vexed question" ranking with that of the "purity of Italian queens." After all that has been written about the hive by the most prominent bee-men, I hate to add anything; but as the Journal is open to all, to give their views and experience, I will candidly give mine for what it is worth. Of all the hives I have seen and tried, none have suited me better than the regular Langstroth. But even that does not come up to my view of what a good and useful hive ought to be. In the April number of the Journal, current year, page 240, J. L. Hubbard describes just *the hive we want*. I will give his words:

"We want a hive which can be completely closed and fastened, so that it can be set in a wagon, or sent off by express, safely, whenever it is deemed desirable. It should not take over five minutes to fasten it securely, leaving sufficient ventilation. It should be of such a shape that it will pack to good advantage, for convenience of winter storage and transportation. The frames should remain firm. In hives where the frames are not fixed they will swing easily after being used in the machine. I specify these needs, because it is so often necessary to remove bees, and with many kinds of hives packing is inconvenient, taking up much time; and also because

the subject of moving bees from one location to another, to gather different crops of honey is attracting attention. This branch of business would undoubtedly be carried on quite extensively, if hives were as easily moved as so many boxes of beans. I have never yet practiced this; but want to get my hives in such a shape that I can do it, as I believe in it. Will not those who have done so, give us some ideas of the subject?"

I exactly agree with Mr. Hubbard, in the above description of *the hives we want*, and shall adopt the Triumph Bee Hive by W. R. King, as I think it comes nearer the above description than any I ever saw or heard of, except Adair's sectional hive, which I find too inconvenient to handle. The Triumph has close fitting frames, or *fixed*; can be closed up and fastened in less than five minutes, and has sufficient ventilation for transportation in the hottest weather. It is the best ventilated hive I have ever seen. It is also well adapted for wintering on the summer stand. The close fitting frames literally making one hive in another, which is warm in winter and cool in summer. Also, by means of a partition board, it can be enlarged or contracted at will, and in a few minutes, to suit the size of the swarm; and in the honey-gathering season it can be enlarged, so as for the bees to make all surplus in frames in the body of the hive and on top; and it is well adapted for the extractor. If the apiarian would rather have his honey stored in caps, he can be accommodated with this hive. It is also self-cleansing by means of a moth-trap drawer in the bottom; but that is of minor importance. It can be made without the moth-trap; but I think that by means of the moth-trap drawer, it is the best self-cleaner and ventilator I ever saw. Also the frame of this hive is just the size I want, being 9x12 inside, and is a great advantage to those rearing queens, as three or four of such frames will make a pretty strong queen-raising nucleus, which can be kept strong by exchanging frames with full hives, and so save the trouble of feeding and reinforcing with bees. The frames are so adopted as to secure straight combs. These are only my views, as I have tried only one of them this season, and it has given satisfaction, convincing me of the superior advantages of this hive over many others, I will not say over all others, for I want to try a thing, and in fact always do try a thing, before I give my experience, or what I know of it from experience. I have not given all the advantages of this hive yet; but the length to which I am spinning this out, warns me to stop for the present.

R. M. ARGO.

Lowell, Ky., Nov. 27, 1871.

[For the American Bee Journal.]

Cursory Remarks and Observations.

DEAR EDITOR:—I intend again trying to drop you and the readers of our beloved Journal a few of my thoughts, experiences, &c., in order to give you a better chance to select such articles

as may seem best calculated to promote the worthy cause of bee-culture. I think many others of your subscribers who have hitherto contributed nothing in this way would confer a favor on the bee family and often aid the inexperienced if they would take notes of what is daily transpiring in their apiaries, and send them to the editor to give him a larger supply of materials from which to select. Nor should any feel disappointed if his contribution does not appear, but rather be glad that there was in the editor's possession some article better suited for publication, or just then better adapted to the passing season.

The first thing I do when I receive the Journal is to put a few stitches in the back, rip open the edges of the leaves, take a hurried glance over the pages, and if the mill is not running empty, pick out what interests me most. I often have to let it drop, and run to some work, but that evening it gets pretty thoroughly finished, even if it takes till twelve o'clock to finish it. In two days after receiving it I would be ready for the next number.

Well, I see in the August number that Novice has a bran new scale, to test matters closely. I received one also about the same time, but, brother Novice, I would not trade even with you, as you say yours only weighs sixty pounds, and you cannot weigh a Langstroth hive on it. My scale cost fifteen dollars. It is a Fairbank's and Greenleaf double beam platform counter scale, with brass hopper, and will weigh two hundred and eighty-four (284) pounds, and as low as half an ounce. I like it very much, and think it is the very thing for bee keepers. They should each have one. I had a hive of hybrids in a Langstroth on the scale from the 16th of August, with the following result: August 16th, gain $\frac{1}{2}$ lb., 17th, $\frac{3}{4}$ lb., 18th, 1 lb., 19th, $1\frac{1}{4}$ lbs., 20th, $2\frac{1}{4}$ lbs., 21st, $1\frac{1}{2}$ lbs., 22d, $2\frac{1}{4}$ lbs., 23d, $2\frac{1}{4}$ lbs., 24th, $3\frac{1}{4}$ lbs., 25th, 2 lbs., 26th, 3 lbs., 27th, $4\frac{1}{4}$ lbs., 28th, none, rainy and cold, 29th, lost 1 lb., 30th, gained 1 lb., 31st, 4 lbs., Sept. 1st, 5 lbs., 2d, 5 lbs. The hive was then removed and another put on of black bees, not quite as good results. I did not try my best hive, which would have shown much better results. When I weighed them this fall, I only found out which was my best hive. The above can be considered the product of fall pasturage. Novice's, I judge, was spring honey, as his article had to be in Washington by the 10th of August. My hive was always weighed in the evening. In the morning it always lost from two to three pounds. I cannot see how Novice's gained from six to thirteen ounces so early as from six to seven, seven to eight, and eight to nine o'clock in the morning. Mine only commenced gaining from twelve to six in the afternoon. On September 23d, they were still gathering at the rate of one and a half to two pounds per day. Soon after that frost stopped their operations. My best hive goes into winter quarters with one hundred and seventy-six (176) pounds, hive and all. Take fifty pounds off for hive, leave one hundred and twenty-six (126) pounds. Take off again thirty-five pounds for bees, combs, and winter stores, would leave ninety-one pounds of surplus,

that I could yet extract if I had an extractor. Do you think, brother editor, that thirty-five pounds is enough to allow for bees, combs, and honey for winter, if they are wintered out of doors?*

My present stock consists of twenty-five colonies in Gallup-Langstroth hives. I place them with their backs together, stuffing hay between them and around the hive, with the exception of the front. The north and west sides are boarded up and covered, leaving the east and south side open. Last winter I had them in my cellar, which is very dry, with not quite as good results as I should have liked to see. How the present plan will do, I may let you know, if we live next spring—as wintering bees is one of our greatest difficulties; that is wintering them successfully.

I suppose my subscription will soon run out, but send the Journal right along, and your money will soon follow.

I have some lumber ready for Gallup hives, as quick as we get that “haah,” if it pleases me.

My article is getting long, so I will close, wishing success to you and the Journal, and subscribing myself as before.

A MILLER, *by profession,*
but not a MOTH MILLER.

[For the American Bee Journal.]

Useful Suggestions.

MR. EDITOR:—Many of our experienced apiarists, who write very interesting articles for the Journal, are not explicit enough in describing the smaller details of any process or article described.

First.—For instance all of our eminent beekeepers agree that feeding in the spring promotes early breeding and a consequent great yield of honey, if nature does her part. Various styles of feeders are described, and recipes for making stimulation bee-feed, and just when and how to introduce it to the bees. But in no instance, as I have thus far seen, do they tell us *how much* to feed at a time. If a beginner is to buy sugar for spring feeding by what method can he estimate the amount required? Is there no definite rule to guide us as to how much to feed to a good strong colony daily? Those who advocate and practice feeding should be able to tell us somewhere near how many pounds or ounces per day, will put the queen in the best possible humor for depositing eggs rapidly and right end up with care.

Secondly.—The honey emptying machine has been described many times in the Journal, and directions published telling us how to get up home-made machines. But the writers all forget to tell us what kind of wire cloth to use to

* The quantity of stores required depends much on the mode of wintering adopted, the kind of hive used, and the character and deviation of the winter. Mr. Bickford's method is inexpensive, easily managed, and if carefully executed with a stock having a due proportion of young bees and a healthy fertile queen, is invariably successful.—[Ed.]

support the comb in the machine. In the construction of my machine, I first used fine woven wire, but it was liable to clog and required greater speed to extract the honey. I now use coarse wire cloth, with better success; yet think of dispensing with wire cloth altogether another season, and use long strips of tin, one inch wide, doubled lengthwise and placed about one inch apart. I operate the extractor in our cellar, which is a very convenient and capital place. The honey runs directly into a strainer, and from thence into jars or barrels. My strainer will hold twenty-five pounds, tapers down to a point, and is provided with a stop-cock at the lower extremity. Jars placed on the scales under the strainer, can be filled to a nicety, and not a single drop of the precious sweets wasted. I find it pays, in the long run, to have everything in the apiary fixed and convenient.

Thirdly.—Movable comb hives are indispensable to successful bee management; but among all the *pros* and *cons*, descriptions and controversies, the length and breadth of the frame is discussed continually, still I have seen no word about the thickness of the frame. Perhaps thickness was settled before I caught the bee fever, about two years ago. But examination of hives at present shows a diversity of construction upon this point, for frames raging from $\frac{3}{4}$ inch to $1\frac{1}{2}$ inches in thickness, are used. In the American, Bay State, and others, $\frac{3}{4}$ inch is the standard. Mr. Quinby uses an inch frame, with half an inch space. Others use $1\frac{1}{4}$ inch frames, with $\frac{3}{4}$ inch space. And here I would ask Mr. Quinby what is the use of so much space between the frames? Are not the bees inclined to fill out the space, and build more drone comb, than in a thinner frame? My little experience leads me to discard thick frames, for my bees seem determined to build drone comb in all thick frames, while $\frac{3}{4}$ inch frames give better results. And I can see but a trifle difference between Mr. Quinby's inch frames and half-inch space, and a $1\frac{1}{4}$ inch frame with $\frac{3}{4}$ inch space.

A large number of beekeepers will soon be constructing their hives, and a little light from those who have experimented and given the subject years of thought, would no doubt interest a large number of your readers. We want the *thick* and *thin* subject agitated, as well as length and breadth.

SCIENTIFIC.

[For the American Bee Journal.]

The Onward Movement.

MR. EDITOR:—I send you to-day two dollars for the seventh volume of the Journal, for a young man who has never kept bees, but who is going to begin; and he will succeed, for he commences with the Journal, as his *first step*.

It has been my experience that those who have kept bees for years, in the old way, and ought to have gained at least a *desire* for improvement, are slow to adopt new ideas; while the new beginner is all alive to its importance, and will commence with movable combs and Italian bees, and comprehend their value, while

old fogies are plodding along with their brimstone boxes, and complaints of poor seasons and poorer luck.

In this section of country the season of greatest harvest varies very much from year to year. This year it was in August, from Clethra (pepper bush) and red clover; last year it was in September and October, from the Michaelmas aster and the golden rod; and the year before it was during July, from white clover.

Those who keep their stocks always strong, do well; while the rest go hit or miss. For instance, this year, from my eight or nine colonies, I have gathered over four hundred pounds of honey, and increased to eighteen colonies. Others in this neighborhood have not had a pound of surplus honey from a greater number of stocks; and it is not at all strange that young beginners ask my advice, instead of going to those who keep bees in hives and with the ways handed down from their great grandfathers.

In reading over quite a number of books which have been published for the last hundred years on bees, I was astonished to find so much in them which harmonizes with modern ideas, and so much also which has been claimed as new inventions and recent discoveries—movable frames, guide combs, artificial swarming, stimulative feeding in the spring, uniting weak colonies in the fall, the use of puff ball and tobacco smoke, side surplus boxes, ventilation or air chamber over the combs in the main hive, and under the surplus boxes, the treatment of foulbrood a hundred years ago by *pruning* and extra feeding. All these, and many more points of interest, are plainly discussed; and there is only one solution to the mystery that so few knew of or appreciated them, and that is—"Our Journal" wasn't born. Yours, very truly,

E. P. ARBE.

New Bedford, Mass., Nov. 20, 1871.

There are folks who wish in their hearts that the AMERICAN BEE JOURNAL had *never been born*, since they can no longer venture to palm off old things as their own *discoveries*, without fear of detection and exposure.—[Ed.]

[For the American Bee Journal.]

Start of a New Correspondent.

MR. EDITOR:—I am a new beginner in apiculture, and wish to ask one or two questions. *First*.—How is it that we hear so many bee men talking about *swarming time*, and letting bees swarm when in movable comb hives? I take it that one of the great advantages of the movable comb hive is that colonies may be divided up at the owner's will, and not have any "swarming time."

Second.—What is the best plan to work on when transferring from an old box hive to a new movable comb hive? I hear some say that they have taken the old hive, and turned it bottom side up, and set the new hive over it, rapping smartly on the old hive, when the bees would all leave, and take to the new hive. I have tried it in the month of August, when there were a great

many young bees, and could not in any instance drive more than half of them, as the young bees would not leave the combs. But the last ones I transferred I got out with very little trouble, in the following manner: I took the old box hive and carried it away a few rods from its stand, turned it bottom side up on a suitable bench or a box. Then, with a cold chisel, cut the nails so that I could take off one side of the hive. By the time I have pounded enough to cut the nails I will have the bees in a much more tractable state, and the young bees will crawl over on the outside of the hive, and cluster and stay until I get ready to shake them into the new hive. After cutting out the honey, I shake the young bees into the new hive, and the old ones will have flown to the old stand, where a decoy hive, or box should have been placed to receive them. These I also shake in front of the entrance of the new hive. The brood combs I transfer to frames, fasten them with wooden pegs, and insert in the hive immediately. Now, I am a new hand, and may have asked questions which have been answered many a time in the Journal; but I have not seen it, of course.

I started with two colonies, which I bought last spring—one in a box hive, and the other in a small tobacco keg. The small one I had to feed to bring it through. The keg colony gave me a natural swarm, June 20th. The other did not swarm at all; but about the first of August I made an artificial swarm from it, by taking four or five quarts of the bees that were clustered outside of the hive and putting them in a new movable comb hive, with one or two frames of brood comb, and setting the new hive in place of the old one, and setting the latter away in a new location. In sixteen days I found that the bees in the new hive had a new queen out (there were no queen cells in the brood combs inserted), and in less than one week she was laying eggs. The frames of brood were taken from a young swarm which I bought for three dollars—furnishing the hive myself. Soon after this I made two swarms of the young swarm from the keg, and also transferred both old colonies to new movable comb hives. On the 21st day of August I transferred two swarms, and gave them three frames half full of brood combs from their old hives, but no honey; and in three weeks they had three hives full—sixty pounds each. The bees and brood combs were given me if I would take the honey out.

I have now eight stands, all in movable comb hives, and intend to do something more next year. I have done almost all kinds of handling with them, except introducing queens, and shall try that next year. I never saw but one swarm of Italian bees, and they were so cross that I could not see them until they were out of sight, for they drove me out of the yard several times. They were said to be pure Italians, but I doubted it and thought they were hybrids, for they acted like yellow jackets.

One thing more, and I will bring this communication to a close. For one of my neighbors I drove bees enough from a colony to make a new swarm, and placed them on the old stand. They had not been there three minutes before another

swarm (which had been transferred two weeks previous and were working well) were coming into this hive, and all went to work as peaceably and quiet as any single swarm. The swarm that left its own hive had several pounds of honey and plenty of brood in all stages. It made a good thing for the new swarm, for it gave them a queen at the start to go to work with. Who can account for this occurrence?

I consider the Journal an invaluable aid to bee-keepers, and could not think of being without it now. You may count me in as a regular subscriber, and I shall probably not inflict so long a communication on you very often.

J. W. CRAMER.

Onida, Ills., Dec., 1871.

[For the American Bee Journal.]

Lessons of the Past Season.

MR. EDITOR:—As an inducement to others to report their summer's work through the Journal, I have concluded to send you a statement which approximates very nearly what I have done for my bees, and what they have done for me. "Old fossils," as a matter of course, will pursue "the even tenor of their way" despite all "book larnen" and reports, but to the wide awake, live apiculturist, the experiences of others form a "bed rock" upon which to rest secure from defeat and disaster.

I used the honey-slinger only a little, by way of experiment, and that near the close of the season.

I commenced last spring with ten hives of bees, which have increased to twenty.

Box honey procured.....	510 lbs.
Extracted.....	40 "
.....	550 lbs.

I have sold 248 pounds, of it at an average of 27 cts. per pound, making \$66.96. The remainder, for the sake of carrying out this calculation, we will estimate at 25 cts. per pound, making for it \$75.50.

Total value of honey.....	\$142 46
Value of colonies.....	200 00

Aggregate worth of honey and colonies.....	\$342 46
From which deduct,	
Cost of ten new hives.....	\$25
" " honey boxes.....	10
" " 10 old colonies.....	100-135 00

Net balance.....	\$207 46
------------------	----------

Being about 153 per cent. on the investment.

Seven of the colonies furnished no box honey. The average yield of the remaining thirteen colonies was 39½ lbs. each. Greatest yield from any one of the thirteen was 98 lbs., least yield from any one of the thirteen was 18 lbs. I might have taken more honey, even in boxes, but as bee-keeping is a collateral business with me, I failed to give my apiary sufficient attention

during the honey harvest. The colonies are all in good condition for winter.

PRINCIPAL HONEY HARVEST.

I commenced taking honey the last week in August. Swartweed or "heart's ease," as it is called here, furnishes the best honey and the most of it. The last run was upon the golden rod, and the "thousand and one" other yellow blossoms that deck the prairies late in the fall. The last combs built are of a yellowish cast. All those from the "heart's ease" are light colored, and very rich and attractive in appearance.

The President of our State Association, Dr. L. J. Dallas, of Baldwin, has about four thousand (4000) pounds of it bottled up and for sale; so that if any one is curious to know just how nice this "Extract of Kansas Swartweed" tastes, he will know where to get it. I do not design this as an advertisement for the Doctor, as he will have no trouble in selling it at a fair price, without such notoriety.

GENERAL REMARKS.

I am using some hives of my own "getting up," some of the Hoosier; some of the Adair; and some of the Quinby box hives.

I have one stand of Italians, and four hybrids; the others are large, light colored blacks. The hybrids have done better than the pure blacks, and as well as the pure Italians, but I think that the pure blood Italians, everything else being equal, are better adapted than the blacks or any cross with them, to the climate, as well as to the great variety of the pasturage found upon the plains of Kansas.

Black Jack, Nov., 1871.

M. A. O'NEIL.

[For the American Bee Journal.]

A Bee Feeder.

DEAR JOURNAL:—We are an ardent advocate of stimulating bees in early spring, and through August and September, let the hive contain ever so much honey. Novice's idea of "cash capital" in the form of capped honey in frames, is good—nothing better for strengthening weak stocks; yet we do not always have as much as we need, and if we had, we want to give it more in the form of natural supplies to induce breeding.

We have been using a feeder this fall which, for cheapness and utility, we deem the *ne plus ultra* of feeders; and with your permission, Mr. Editor, will try to give a description sufficiently plain that those "who run may read."

We make a frame say six inches square of slats one inch or more wide; cover this one side with thin muslin, drawing the edges of the cloth up all around the frame on the outside, and tacking them to the top. Then we make another frame of slats half an inch wide and six inches square. This is nailed on the bottom, leaving the muslin between the frames. The feeder may be placed over any sized hole in the honey board, where the bees can readily pass under it, without obstruction or having to climb

several inches. By removing the honey board, it can be set on the frames; but it will then be necessary to lay something over the top. If "liquid sweets" run through faster than is desirable, melted wax may be spread over a portion of the bottom, or thicker muslin may be used.

RUSTIUS.

Ohio.

[For the American Bee Journal.]

The West St. Louis County (Mo.) Beekeepers' Convention.

The first quarterly meeting of the "West St. Louis County Beekeepers' Association," was held at Manchester (Mo.), on Saturday, October 14th, 1871.

In the absence of the President, the Vice-President, J. C. Holocher, was called to the chair. The minutes of the last meeting were read and approved. The next order of business was the reading and adoption of the constitution, which, after considerable debate, was, with some modification, adopted.

On motion of A. Herzog, a committee of three was appointed to prepare subjects for discussion—namely: T. D. Woody, G. Kropp, and W. H. H. Woody.

Pending the action of the above named committee, the Vice President addressed the Convention in regard to the object of the same, briefly touching upon several very important points pertaining to apiculture.

The committee reported the following topics for discussion:

1. Natural vs. artificial swarming.
2. When is the best time for placing surplus honey boxes on hives?
3. What is the most profitable size for honey boxes?
4. Bee pasturage.
5. Wintering bees indoors or out.

These topics were then taken up in order, for discussion.

1. INCREASE OF STOCKS—NATURAL vs. ARTIFICIAL.

Mr. Kropp said he had no success whatever in the increase of stocks artificially. He had tried it, but the bottom had fallen out. He favored increase by natural swarming, and considered such swarms superior to any artificially produced.

Mr. W. Woody said that artificial increase of stocks was best for one reason; you could increase them to the amount desired with less trouble, and have them in better condition for wintering, than if natural swarming be relied on.

2. BEST TIME FOR APPLYING SURPLUS HONEY BOXES.

Mr. T. H. B. Woody thought the best time for putting on surplus honey receptacles was (if pasturage was favorable) as soon as convenient—the sooner the better; for a few days lost can never be regained. He would suggest, that as soon as

the bees showed signs of gathering honey from the fields, was the time when boxes should be placed on hives; and as soon as filled and capped over, they should be taken off, and other boxes substituted in their stead.

Mr. Kropp said he practised the same method, but found that after the removal of the field boxes, the bees did not like to resume work in the empty boxes given to them. For one, he should like to know if there was no way to compel them to work in the empty boxes given them.

Mr. J. C. Holocher said he did not know of any way by which bees could be made to work immediately in boxes, without inserting a small piece of comb in the box. This, he believed, would answer the purpose admirably.

3. MOST PROFITABLE SIZE OF HONEY BOXES.

Mr. Herzog thought that boxes with glass sides, that would hold about four-and-a-half or five pounds, are the most profitable size.

Mr. J. C. Holocher thought that boxes containing about eight small frames—each frame weighing from one to two pounds—are the proper size for market. They will sell more readily, and have a better appearance.

Mr. Dosenbach had had no experience in selling or raising honey, for he had just commenced beekeeping last spring. The season was not favorable for storing surplus, but he thought the small frames the best.

Mr. T. H. B. Woody did not want box honey at all. He believed in the use of the melo-extractors, for you could get a larger yield, besides returning the empty combs to the bees, which was of great advantage to them.

Mr. Kropp thought boxes would do for him, for a person was liable to "sling too much from his bees," if he uses the extractor.

The hour being late, and some of the members wanting to leave for home, the remaining two topics were laid over until next meeting.

Having no further business for the convention, Mr. Whiting, of Pacific, (Mo.), was called on for an address on apiculture, to which he responded substantially as follows:

Ladies and Gentlemen: I must confess that I am unprepared for this occasion. Being called on so unexpectedly, you must not expect me to begin at one end of bee-culture and go to the other; but I will briefly touch one or two minor points. *Who should keep bees?* I reply, one and all. All persons who own a rod of land should keep bees; and if you do not have the rod of land, keep them, any how (Laughter). If you reside in the city, it affords you an opportunity to keep bees. If you live on the mountain tops, or in the vale; if you are a mechanic, or a farmer, or a lawyer; whether you are rich, or walk in poverty's vale, you can keep bees; and they will return you a handsome reward for your care and trouble. Allow me, therefore, to say to one and all, "keep bees;" and to keep them successfully, it is of no difference whether you own a foot of land or not. You have a free pasturage for your bees. "Keep the bees," and they will get the honey for you (cheers). Now, kind

friends, I must bid you adieu, and close my short address. But I will say, go on with this work, and read on, and put it to the test. This is the only way to keep clear of all humbugs. Remember that bees need attention in the proper way, and at the proper time; and if you attend to this rightly, you will undoubtedly reap your share of success. With this I close, thanking you for your kind attention and hospitality during my visit.

At the close of this address, the association returned their sincere thanks to Mr. Whiting for the interest he had taken in the association, and in beekeeping generally.

On motion, it was resolved, to hold the next meeting at Ballwin, on the first Saturday in January, 1873, commencing at 10 o'clock, A. M.

On motion of Mr. Dosenbach, the association then adjourned.

J. C. HOLOCHER, *Vice President.*

ENUE DOSENBACH, *Secretary.*

[For the American Bee Journal.]

Notes from Northern Iowa.

DEAR JOURNAL:—Perhaps a few notes from Northern Iowa will be as interesting to the readers of the Journal, as notes from other States are to me. I see the accounts from some parts report a total failure of the honey season, while in others it was tolerably good. We have had an extra good season here, both for surplus honey and for increasing stocks. My bees stored honey from the 15th of April to the 15th of September (five months), without any cessation. I had twenty stocks in the spring, which I have increased to fifty, and have taken sixteen hundred (1600) pounds of surplus honey. I did not get an extractor till after the basswood season was over, or I would have taken one hundred pounds from each stock. I had eight colonies in the spring that gave me eight hundred (800) pounds of honey and ten new swarms. My new swarms are mostly artificial.

The plan I adopted was to drive out a swarm and set it in the place of the parent stock, and remove the parent stock to the place of a strong colony, removing the strong colony to a new place. I do not know which is the best plan to make swarms, but all plans worked well this year. After I had doubled my colonies by artificial swarming, they swarmed ten times more, just to show me that I wasn't boss.

My bees were all black, that gathered the honey; but through the kindness of friend Gallup, I obtained nine nice Italian queens, which are all comfortably situated in their new homes. I also sent to Adam Grimm for a queen, which came by return mail, and has proved to be all right.

I am a new beginner in the improved style of beekeeping. Last spring I said to my neighbors that I intended to double my stocks and take a thousand (1000) pounds of surplus honey. They said I had "bee on the brain," and that I would meet with obstacles enough before fall to cool my fevered brow. But by the help of

the American Bee Journal, and many valuable lessons from Gallup, I have succeeded far beyond my expectations.

Mr. Editor, I think that "bee on the brain" is essential to success. If a person has other business on the brain, his bees will go neglected. I take solid comfort in my daily walks among my little busy workmen, while attending to their many wants. My wife, who takes pleasure in assisting in the swarming season, often takes charge of them in my absence. But when it came to extracting, what then? Why, there was honey in every dish; honey all over the house; our hands and clothes were all daubed with honey; and, to put in the variations, the bees were so loving they lit on wife's face—eyes she had, but they saw not, neither did they want to see the bees again until a short time ago, when returning from town with a bundle of goods (bought with *honey*, you know), she gave them one look, which said: you little scamps, I forgive you.

I hope to meet lots of warm-hearted beekeepers at the Cleveland convention, where I expect to have a good time.

J. W. LINDLEY.

Mitchell, Iowa, Nov. 14, 1871.

[For the American Bee Journal.]

. Report from Bethlehem, Iowa.

MR. EDITOR:—In compliance with your request, I send report for 1871. I will be as brief as possible.

In the spring, I found I had twenty-six stocks, in good order, one queenless, one crippled, and one black colony. The latter I had run against an artificial Italian, as reported in the November number of the Journal. It was so weak that it could not stand the cold, and gave up the ghost. The queenless one I doubled up, and killed the crippled one, giving the combs to others. Examined and equalized the colonies, gave each a due share of bees, as near as I could, and about fifteen pounds of honey.

I also bought four swarms in gums and box hives. Two of these had cast swarms before I got them home. All new swarms were fed until their hives were built full of comb, when the weather rendered it necessary.

The result of the season's operations, was an increase to forty-nine (49) strong stocks, and two weak ones.

2,550 pounds of extracted honey.

1,502 " of box and frame honey.

500 " in old combs.

I cannot say much of the manner in which my bees have been put to into winter quarters, on account of the very serious accident I met with, which prevented me from overhauling them before putting them away. I had put in empty frames for them to fill. They usually lengthen out the cells, when put in late in the season, instead of starting new comb.

FRED. CRATHORNE.

Bethlehem, Iowa, Dec. 11, 1871.

[For the American Bee Journal.]

Inquiries and Remarks.

MR. EDITOR:—I wish to ask several questions through the Journal, and will try to answer some in the first place.

I received two splendid queens from friend Benedict, on the 9th of August, and introduced them to black colonies in the afternoon; the first one according to his directions, by placing her on the comb near the centre of the chamber (only I dipped her in sugar syrup scented with peppermint; with which I also thoroughly sprinkled the bees, shaking them up well before turning them out of the box, instead of diluted honey, as directed.) This was done at about three o'clock, and the next day at about noon, I went to the hive and saw a dense crowd of bees in one of the entrances. I scraped them out, and there they had the queen hugged up in their centre. I released her and put her in a cage, which I inserted between two brood combs. She did not appear to be hurt, but the next morning she was dead. Why did they drag her out, after so many hours?

With the other one I followed D. L. Adair's plan, by scenting all alike and dropping her in among the bees. She was well received, and has done well. On the evening of the sixth day I brushed all the bees that had killed their queen from the combs in the chamber and removed the chamber from the case that had the Italian queen and put the other in its place. I brushed the queen and bees all off in front, and gave the chamber to the queenless colony. On the eighth day I opened it and found two queen cells capped, and three more started on the face of a piece of drone comb. I caged the two that were capped with Novice's cages, according to his directions, and when I opened the hive to see how the young queens were getting along, I found the cages cut loose, so that they dropped out when the sections were parted, and both queen cells destroyed. Two of these cells on the drone comb were capped over, but neither of them ever hatched out. I tried the cages on two more cells in another hive, and they were also cut out; but one of the queens was all right, and is doing well. Now I would like to know why it is so, if Novice's bees do not cut them out?

Next, I would ask Mr. C. E. Widener why a piece of wire cloth, two feet by four, would not be as good, or better than a piece three feet square, to make his wax extractor? It would make a box of one foot square and two feet high, which could be put in a much smaller kettle, than a box nine inches square and three feet long.

Then, again, I would like to know what is to become of the brood and eggs that are in the combs when introducing queens by the German process, on page 98, November number.*

Some one has asked how to keep the worms out of the hives? I would answer, simply by keeping your stocks strong, especially if there is any Italian blood about them. I had a box

hive of black bees that got weak, and one morning I saw robbers pitching into it. I closed the entrance and carried it to the cellar, letting out the robbers when I got inside the door. Next day, about ten o'clock, I removed a stock of hybrids (which I suppose has a black queen that mated with an Italian drone, as I know of no chance for an Italian queen to have got in there), to the place from which I had removed the weak stock, and set the weak stock in the place of the hybrids, never dreaming that it was infested with worms. Next morning I saw that some cocoons had been carried out of it, and on turning it up I found a good handful of shatterings that the bees had made in cutting out the worms and cocoons, besides about twenty cocoons and a great number of worms of all sizes. I cleaned out the shatterings every morning, and in four days all cutting out ceased, and I did not find another worm in the hive all summer. This fall I transferred it to a frame hive, and did not find a single worm in the combs, though they were badly cut up near the top of the hive.

Trenton, Ills., Nov. 6, 1871. C. T. SMITH.

[For the American Bee Journal.]

The Season of 1871, in the Oil Region.

MR. EDITOR:—It is a long time since I have contributed anything to the Journal and as I have seen nothing in it from any of the beekeepers in the oil region, I concluded to write a few lines.

We are on a level here now with many of our friend beekeepers throughout this broad land, for we have had a very poor season here for both honey and increase. Very few swarms issued this summer, in this section. I had only ten swarms from seventy-six stocks. My first swarm (a hybrid) came off May 19th, and this new swarm swarmed June 27th. My first swarms of black came off June 30th.

The spring of 1871 opened exceedingly promising, both to the farmer and the beekeeper; but the drouth in May materially checked the prosperity of the latter. Our stocks were not as populous on the 1st of June as they were on the 1st of May. I saw drones flying in my yard in April, which I never saw before since I have kept bees—now seven years.

Now as concerns the honey slinger, I do not think its use would be altogether economical for this section, as our only dependence is white clover and buckwheat. Now suppose we had abstracted the clover honey, and depended on buckwheat for winter stores, would we not have been far below the level of many beekeepers who have a continuation of forage throughout the season?

Old stocks generally are in good condition for wintering, but the swarms are not. We have had a very changeable season, with frosts in every month except August, since October, 1870, and of course shall have for the next six months. Drouth was the cause of the total failure of buckwheat honey.

I met many of my neighbors at the election, and after inquiring after the welfare of my family and bees, some wanted to buy bees, and

* See note on page 167.—[Ed.]

some wished to engage hives. Mr. G. said that he had bought the right of the American hive for this township from Mr. King. I told him that Messrs. L. & H. own the township, having bought it three or four years ago. *Well, I don't care* said he, *I have paid Mr. King for it, and am going to have it.* Now said I, Mr. G. I reckon you are pretty badly sold, and drawing from my pocket the October number, volume seven, of the American Bee Journal, read him Mr. E. Liston's article on page 82, and also some other articles in the same number, and then asked him how is that for high? This is the paper you want to pioneer you through. It will knock all this humbuggery higher than a kite. Suppose you bought the right, what do you get? Oh, the side opening, &c., &c., said he. Now, replied I, look out for breakers, and look before you leap. The word American is a great word, and this American is a great nation; but the American hive is no *g-r-e-a-t t-h-i-n-g*. M. WILSON.

Meredith, Pa., Oct. 16, 1871.

[For the American Bee Journal.]

A Word of Explanation.

Our correspondence extends from Maine to Oregon, and from Canada to Texas, *all free of charge*, and before publishing the article charging the dollar, we had as high as thirty-six letters in one week, on the hive question, leaving out of view our correspondence on other subjects pertaining to bees and bee keeping. We did not wish to give a description of our hive to every one, until we had fully tested it ourselves, for after what Mr. Alley and Mr. Green said of us we actually did not know how much of a *fool* we might be. Another thing—it is not to be supposed that every *green-horn* can manage a large hive until after he has learned to use a standard hive.

Our article referred to above was intended as a burlesque on those chaps that have a hive that beats all other hives in existence, &c., and the dollar that has caused such a *fuss* was intended to stop the costly correspondence, which we are foolish enough to think that no person living would or could stand. And it has done it pretty effectually.

We had our reasons for getting up such a hive as we have, and any person who has attentively read our articles ought to know that when the proper time came we should certainly give them the description *free of charge*. It would be for our personal benefit and a great relief to do as Novice does—that is, refuse to answer correspondents entirely. But when we come to consider how many thousands there are that wish for information, and yet feel a delicacy about asking for that information publicly we cannot refuse. Therefore after working hard all day we devote hours of the night, when others are sound asleep, to answering the inquiries of correspondents, and yet for all this, see the *kicks, cuffs* and *abuse* we receive through the Journal from certain gentry of the long-eared persuasion. Please excuse us, Mr. Editor, for giving them

just one little touch of our pen. The worst we wish them is that they might be placed in our position for one year. We would also state here that a Mr. Jones, of some place in Canada, sent us a dollar, but neglected to give us the name of his post-office. Will he please take notice?

THAT HIVE OF GALLUP'S.

Our standard hive is twelve inches from front to rear, twelve inches high, and eighteen inches wide, inside measure, containing twelve frames, and having a cap eight inches high. Our nucleus hive is in the same form, containing twelve frames, with four apartments, each apartment containing three frames (standard frames). We will say it extends east and west, or is an oblong square. The entrance to one apartment faces the east, one south, one west, and one north, with a honey board over each apartment, so that each can be opened without disturbing the bees in the others. In one of these nucleus hives we raised the past season twenty-eight queens; had twenty standard frames filled with nice worker combs, extracted sixty pounds of surplus honey, and are now wintering four spare queens in it, with abundance of honey to winter on. Now you can readily see that in the fall we can readily put all those combs and bees together in a standard hive by removing three of the queens, and have a good standard colony. We can exchange combs, brood, &c., with any standard colony, for strengthening up, supplying with honey, or for any other desirable purpose. Four and a half inches is the right space for three combs, but we make it five inches. This gives ample room for handling, without endangering the queen. By working four nuclei in one hive they are of a mutual warmth, one to the other, and there is no more danger of losing a queen than there is where we have each separate.

Then we have what we call an *emergency hive*. If we run short of hives we can put one of these together in about twenty minutes, and by having a supply of frames on hand we are all right. This is simply an open box without top or bottom, containing twelve frames. We saw off a rough board for a bottom and one for a top, and put a swarm in. This hive can be completed at our leisure, so there is nothing lost.

Our next hive, in outward appearance, looks so much like a Langstroth hive, with Langstroth entrance blocks, that we really think he has somewhat infringed on our rights, and we take this opportunity of telling him so.* We call this hive our "Youreka, Back Action, Extraction, Reversible, Revolvable, Non-Swarming, Movable Comb, Twin Bee Hive." (Please to take notice that hereafter we shall charge a dollar extra for simply writing the name in full of this wonderful hive.)

This hive is simply a case made Langstroth style, with a centre board with passages for bees, and containing one set of our frames directly in

* Keep a sharp lookout, or the "Great [Humbug] American Apiarian" will *sneak* out a patent on these blocks, and prosecute both Mr. L. and yourself as *infringers*!—[Ed.]

the rear of the other portion, and entrances at both ends just alike. We made six of these containing thirteen frames in each apartment, or twenty-six frames to the hive. We made one containing sixteen frames in each apartment, or thirty-two frames to the hive, and this gave us the most satisfaction. We made a cap eight inches high for appearance sake, and for wintering purposes, and thus we can set boxes over one set of combs and use the extractor on the other. We make the roof in the Bay State form, independent of the cap, so that it sets on over the chamber or cap, sugar box fashion. In summer if we do not use the cap we can lay it away, and the roof protects the main hive.

In future we shall make the caps high enough to hold a set of standard frames for some of our queens occupy the entire twenty-six frames, over four thousand (4000) cubic inches, with brood, and we are bound to furnish them with room according to their strength, even if they do lay themselves to death, though we have no fears on that head. Now we shall have our fifty-two frame hive, a thirty-two frame hive, a twenty-six frame hive, a twelve frame hive, and nucleus hives, all containing the same size frame, and any frame in the yard will fit in any hive in the yard, and in any place in any hive, and they are all reversible.

This article will be too long to permit us to give the management, but, friends, we will now come down to dead earnest. No joking now! A large colony of bees will store surplus honey, while a small one scarcely makes a living. Any colony, especially the Italians, will store more surplus honey in the same apartment with the queen than they will otherwise. Nearly every person familiar with the Italians has noticed this trait in their character—that is, their reluctance to take possession of surplus boxes, in comparison with the black bees. This was very forcibly illustrated by Mr. Langstroth at the Cincinnati Convention. When we give the queen room according to her strength, she will breed beyond all our previous calculations—that is, a good, prolific queen. A hive to suit our notions must be so constructed that we can enlarge or contract the brooding and storing capacity at will; or, in other words, one in which we can manage the smallest or the largest swarm to best advantage.

As this article is getting long, and we must soon close. Our first swarm came out on the 14th of May. We hived it in one end of our thirty-two frame hive, making use of the division board the same as we do in our standard hive. As soon as the bees commenced building drone comb we removed the division board and filled up with worker combs. When these were all occupied with brood we filled the other end of the hive also with worker comb, moving some of the sealed brood into that apartment, and replacing with empty worker comb in front. The queen soon began to spread herself most gloriously into all parts of the hive, and when the basswood began to bloom, we had a bursting swarm in that hive, you had better believe. The last of June we commenced using the extractor, first taking all the honey from one end of the

hive, and the next time all from the other. We extracted from that hive every third day, and we now know that we ought to have taken it out every other day, for it was all of it half sealed every time, which you will readily see involves a loss of time, a waste of honey, especially when they are gathering rapidly. At one time I did not overhaul it for five days. Consequently they filled up the combs, built queen cells, and on the 4th of July out came a rousing swarm (celebrating the 4th, I guess). I have them in a box, extracted all the honey from the parent hive, cut out the queen cells, and returned the swarm. They went to work with a will. In overhauling the hive I endeavored to keep the brood about equally apportioned in each apartment. The queen passed into all parts of the hive freely, and the workers poured out and in, at both ends of the hive. The regular entrances were left open to their full capacity, besides an inch hole in the centre of each end, yet during a large part of the time both porticoes were clustered full of bees at night, when they quit work.

In thirty days I obtained from the hive fifty (50) gallons of excellent thick honey (a gallon will weigh twelve pounds). An average of twenty pounds per day for thirty days in succession is not bad for one swarm of bees. I took five and a half gallons from that hive the first week in September, have at least six gallons more in the hive, over and above what will be required for wintering the swarm.

Mr. Editor, please to tell Novice that I am not going to tear down that hive yet. My better half suggests that I put on a steeple, and call it a church instead of a bee hive! What a congregation, and what excellent sermonizers.

And now, Mr. Editor, if any more of them 'ere donkeys wish to bray at Gallup, don't hold them back a particle, just let 'em bray!

Orochard, Iowa, Dec., 1871. E. GALLUP.

[For the American Bee Journal.]

A Puzzle.

Some time in August, last summer, I killed the virgin queen of a nucleus hive, because the bees had crippled one of her hind legs so much that I feared she was unable to become fertilized. Next day I opened this nucleus for the purpose of inserting a new queen cell, and found the bees perfectly quiet and content. On examination I found among them an apparently fertile queen, whose wings were clipped. As there was no other nucleus within ten feet of this one, where did this queen with clipped wings come from? There was standing at that distance, directly behind this one a nucleus which had swarmed off; and as at that season of the year, I nearly always clip the wings of the young queens as soon as they become fertile, the queen of this decamping swarm could probably not accompany the workers, may she not have fallen to the ground and afterwards travelled ten feet ahead, and then been *boosted* up by the workers of the other queenless nucleus? Or how did such a queen get in there?

A. GRIMM.

Jefferson, Wis., Dec. 1871,

THE AMERICAN BEE JOURNAL.

Washington, January, 1872.

1872.

While politicians are cogitating and agitating the question of a *new departure* or of *no departure*, seemingly with little prospect of reaching a satisfactory solution, beekeepers may, we think, look forward with confidence to an extraordinary and unprecedented advance in their business in the year on which we are just entering. They are on the verge of a new era—old modes and practices, old-fashioned hives, and hives as hitherto constructed, are destined to be superseded; and that which a few years ago was a mere by-play in the commerce of the country, is about to assume a prominence and an importance hardly conceived of even by the sanguine a year ago. But those who would reap benefit from this progress in improvement, must keep themselves advised of each onward movement as it is made.

Very many articles intended for this number of the Journal, reached us too late to be available. The holidays compel us to be early on the ground, or lag lamentably in the rear.

We have received a copy of "VICK'S ILLUSTRATED CATALOGUE AND FLORAL GUIDE," for 1872, published by James Vick, Rochester, N. Y.,—a decided improvement on those previously issued.

The instrument called *rafraichisseur* by the French, and used by them for perfuming gloves, handkerchiefs, &c., which we mentioned two years ago, as employed by Major Von Hruschka in introducing queen bees, is simply the instrument long known in this country as the *atomizer*. It is made in various styles, and sold at prices varying accordingly. It can be readily obtained from or through any druggist. Very good ones are sold here, in Washington, at fifty cents each, and they are quite as efficient for the purpose designed, in bee-culture, as those much higher in price.

We do not share the apprehensions of several of our correspondents, as regards the overstocking of districts with bees, or over-production of honey. In a new business, such as beekeeping for commercial purposes is, occasional difficulties will undoubtedly present themselves, but are sure to be of only temporary force. It will be some years yet before the ordinary sources of forage in any district will prove inadequate to supply the colonies kept there, if these be properly managed; and then artificial pasturage can be furnished to an almost unlimited extent. Amid a large and rapidly increasing population, also, the de-

mand for honey is a certain and growing one, and likely to keep pace fully with the supply. Of course, we do not suppose that "fancy prices" can or will be kept up, nor is it desirable that they should be; but the business will, on the whole, always be remunerative, especially as new uses for the article will, from time to time, come in to sustain the markets. With care and attention almost every beekeeper can open and secure for himself, in his own neighborhood, a good and steady market for the product of his bees; and then, even "extracted honey," which now causes so much uneasiness in some minds, will command a good price, and be readily sold. This home market, within his immediate reach, the beekeeper who aims at a steady and *paying* business, should strive to establish and cherish. Suddenly rushing large quantities of honey to a market unprepared to receive it, and there ordering forced sales, will, as in the case of any other article of merchandise, produce depression of price and loss. This should be avoided, and may readily be guarded against, as honey is by no means a perishable commodity that must be promptly disposed of, like the small fruits of our gardens and orchards, but can be easily and safely kept stored (especially in barrels), and brought out as called for by the requirements of the market. Dealers, too, will soon become aware of this fact, and supply themselves with honey, as with other merchandise, to provide for the exigencies of trade.

German Beekeepers' Convention.

The Seventeenth Annual Meeting of German Beekeepers was held in the city of Kiel, in Holstein, on the 10th of September, and the three following days. Professor Hensen, of Kiel, was President, and Dr. Möbius, also of Kiel, first assistant or Vice President. The second assistant, Mr. Schmid, of Eichstadt, who is the only permanent officer, and is delegated by the Bavarian Government, was prevented by illness from being present, and Dr. Ziwnsky, of Prague, was unanimously chosen to supply his place. There were about four hundred beekeepers in attendance. The President announced that donations for distribution as premiums on articles sent for exhibition, were received, as follows: from—

The Prussian Royal Agricultural Department.....	\$300
The City of Kiel.....	300
The Agricultural Union of Holstein.....	50
Various Agricultural Societies.....	61

Aggregate, \$711

which would be allotted by the Committee on Premiums.

Mr. Mölling, as representative of the city of Kiel, made an address of welcome, and stated that the inhabitants of that city and of the entire province, were

rejoiced to learn that this useful body had selected Kiel as the place for the annual meeting in 1871, and were well aware that the selection had been made with the express design of promoting bee-culture in that quarter, where, though bees were kept, improved modes of management were scarcely introduced.

Then followed discussion of the various topics announced by the Executive Committee, consisting of the President and the assistants—the chief of which were Living Bees, Bee Hives, Implements of Bee-culture, Honey, &c.—the debate, in each case, being opened by the person propounding the topic, if he happened to be in attendance.

Salzburg, in Bavaria, was chosen as the place of meeting in 1872, and Count Lamberg was appointed President of that meeting, and Professor Dr. Königsberger, First Assistant. The city of Halle was named as a desirable place for the meeting of 1873.

The proceedings and debates have not yet been published, but will appear in the December numbers of the *Bienenzeitung*.

Beekkeepers' Convention.

In conformity with the previous understanding the beekkeepers convened at Cleveland, Ohio, on the 6th instant, united in one body under the name of the North American Beekkeepers' Society, adopted a constitution, and elected the following officers:

President.—M. Quinby, St. Johnsville, New York.

Vice Presidents.—A. Benedict, Bennington, Ohio; J. E. Hetherington, Cherry Valley, New York; E. J. Peck, Linden, New Jersey; Seth Hoagland, Mercer, Pennsylvania; D. L. Adair, Hawesville, Kentucky; Dr. T. B. Hamlin, Edgefield Junction, Tennessee; Dr. G. Bohrer, Alexandria, Indiana; E. Rood, Wayne, Michigan; M. M. Baldridge, St. Charles, Illinois; R. C. Otis, Kenosha, Wisconsin; J. W. Hosmer, Janesville, Minnesota; Mrs. E. S. Tupper, Brighton, Iowa; A. S. Stillman, Louisiana, Missouri; Dr. L. J. Dallas, Topeka, Kansas; W. D. Roberts, Peru City, Utah; Rev. W. F. Clarke, Guelph, Canada.

Secretary.—H. A. King, New York.

Recording Secretary.—A. J. Cook, Lansing, Michigan.

Corresponding Secretary.—A. I. Root, Medina, Ohio.

Treasurer.—N. C. Mitchell, Indianapolis, Indiana.

When we receive them, we shall select from the proceedings of the society, such items as may appear to be of interest to our readers.

We are by no means partial to the plan adopted, of organizing a national society, as we do not believe that it will best conduce to the advancement of the object which should be chiefly aimed at—the promotion of bee-culture in the United States, or in North America. The meetings of bodies thus organized, will usually have a slim attendance, exert a very restricted influence, and ultimately fall under the ban of a

clique. We like the German plan much better, and the experience of many years shows it to be admirably adapted to rouse interest and spread information, both theoretical and practical, over a wide extent of country. Attempts may, even there, be made to run the meetings in the interest of designing parties, but they are quickly detected, exposed, and thwarted, by those who have no "axes to grind."

Mr. H. A. King, in desperation, has attempted to show that Mr. Langstroth did not invent the kind of movable comb frame which he has patented, and which has been so eminently successful in making bee-culture a pleasant and profitable pursuit. He hopes to effect this by presenting a list of parties who, it is claimed, also *thought* of this thing, tried to produce it, and *FAILED*. This is a very novel mode of ratiocination, indeed, and ought to entitle Mr. K. to a fourth or fifth patent, quite as good and valid as any he now has, or ever *pretended* to have. Invention, within the meaning of the patent law, we have always understood, was the "conception of some new and useful thing, and the embodiment of that conception in a *practicable* form;" and "he who first *perfects* a device and makes it *capable of useful operation*, is entitled to a patent, and is the *real inventor*, though others may have had analogous ideas, and experimented to bring them into use."

Now, how stands the case with these alleged prior American inventors? Admitting the accounts given by them to be true, it is notorious that their frames, and all their attempts to make and use them, were *decided failures*—so regarded even by themselves. They and their miscarriages quickly sank into oblivion, being dead and buried, till Mr. King, like a body-snatcher, comes and resurrects them from their graves, to string up their bones *in terrorem* in the limbo of some museum of misbegotten and abortive conceptions. Certainly their contrivances, whatever they were, were *not practicable* movable frames, like those of Mr. Langstroth, or there could be no controversy about them now. Nobody (except it be some sanctimonious skin-dresser) ever quarrels about the carcass of a skunk, but all rejoice when it is decently interred, and are glad to let it rest undisturbed. There never was a living principle in any of their inventions, or they would not have died and "made no sign." There was in their frames (admitting they ever made any) some inherent fatal defect or vice, involving failure as a necessity; for, despite of all their skill and efforts, the fact is patent and undeniable, that *each and all*, in order due, *did FAIL*. This uniform and universal disappointment, and the consequent abandonment of experiment after experiment, are the demonstrative and conclusive proofs of failure. *Success* is here the only infallible evidence of success, and it utterly refuses to testify in behalf of any for whom claims are now set up; while it proclaims, trumpet-tongued, the *practical* efficiency and high

merit of the Langstroth frames. No sophistry can set this aside, nor will King's plausible effort to deck falsehood in the garb of Truth, avail him aught in the end.

We have here referred only cursorily to the case of the American pretenders. That of the foreign claimants, we shall consider and dispose of when the Court has given King his *quietus*.

Mr. H. A. King sent us what purported to be a copy of the Baron of Berlepsch's Declaration. We declined to publish it:

1. Because, though obviously procured to be used in court, it is not in a shape to constitute legal testimony.

2. Because, even if all right in manner and form, publication before it is submitted to the court, is improper.

3. Because we did not know how much garbling it may have undergone in King's hands. We do know that he shamefully garbled Mr. Langstroth's letters to suit his own base purpose; and the presumption is, that he would not hesitate to garble the Baron's paper likewise, for a similar purpose. We did not feel disposed to be caught in such a trap.

4. Because we are not willing to be made instrumental, by him or any one else, in efforts to forestall public judgment, or mislead public opinion.

We say so much from respect to the beekeepers of the country, and not from any regard for Mr. K.

Mr. H. A. King says: "Many believe that Mr. Langstroth first heard of the German frames through letters to Mr. Wagner, prior to 1852." This is an insinuated untruth, about equivalent to an asserted falsehood. Before the spring of 1852, we never heard of Mr. Langstroth; and we never knowingly saw him, nor had we any conversation or correspondence with him till after the 1st of August, 1852. We always understood that Mr. Langstroth applied for his patent in December, 1851, up to which time, and for many months thereafter, there were no practical frames in use in Germany, as we are prepared to show.

[For the American Bee Journal.]

Introducing Queens.

MR. EDITOR:—The German method of introducing queens, translated by you and published on page 98 of the November Journal, whereby all the bees are taken from the hive and kept in a box for twenty-four hours, seems to be all right, save in one important particular.

Would it not be *ruinous* to expose the brood for that length of time, without a bee in the combs?

There is no doubt that bees will accept a strange queen, very readily, when removed from their own hive; but the difficulty with me in thus introducing them has been indicated above.

I have found that if the bees are returned to their hive with the new queen, before they become thoroughly hungry and fully realize their hopeless condition, they are very apt to destroy her.

Should you be able to suggest a remedy, please favor your readers with it through the Journal.

GEO. B. SILSBY.

Wintersport, Mo., Nov. 6, 1871.

THE difficulty suggested, it strikes us is only apparent, in the case of common box or straw hives. It is not necessary, we apprehend, that all the bees, literally speaking, should be driven out; and from such hives this is hardly practicable. A sufficient number will always remain to take care of the brood; and, on transferring, these should have charge of the combs containing the unsealed larvæ, which alone require nursing and attention in ordinary temperature. Where movable comb hives are operated on, the combs containing unsealed brood may be placed temporarily in a nucleus hive, after the mass of bees has been shaken off by a sudden jerk or shock. A sufficiency of young bees will usually remain adhering to such combs, to protect and nurse the larvæ. If operating in cool weather, brood just hatched may need some further protection, such as placing the hive or nucleus in a warm room. But the sealed brood can safely endure exposure to a greater degree of cold than is usually supposed; and it is yet unascertained how much cold and deprivation larvæ, just hatched, can endure without injury. Of course, the less of either to which they are exposed, the better.—[Ed.]

[For the American Bee Journal.]

Overstocking.

MR. EDITOR:—I think this subject is deserving much more attention than it receives. In ten seasons and the following winters, since I commenced my experiments in beekeeping, two winters have passed very fatal to the interests of beekeepers in this immediate vicinity. In 1862 or 1863 two-thirds of the bees in this vicinity starved to death in the winter. I had been taught no danger of overstocking, and half or more of mine perished in the winter following. The harvest of 1866 again proved destructive to the bees in this neighborhood, from starvation. In 1869 the bees had increased, so as to reach a large number for our field, and two-thirds of the bees within a few miles in any direction, starved—perhaps three-fourths of them. To give an idea of results, I must refer to others, as after the first of the three starving winters, I fed my bees in October, and again early in the spring, to carry them through to the flowers. But one neighbor, who placed in winter quarters over thirty colonies, had four colonies to commence the next season with. They increased so rapidly that, in the fall of 1869, he had over thirty colonies. In the spring of 1870 all had starved to death but two. In the whole vicinity three-fourths had died off. One friend, five miles from me, who lived in a very favorable field, supplied abundantly with white clover, went as high as one

hundred colonies, but in the spring of 1870, all were starved but five.

The results in my own experiments, have been thus. In 1867, after so many perished, my best hive gave me one hundred and seventy-four (174) pounds; and my four best gave five hundred (500) pounds. In 1868, my best hive gave one hundred and forty-two (142) pounds; others decreasing in proportion. In 1869 I placed my bees in three fields, some two miles apart, and secured perhaps as average of fifteen pounds—the best might have given as much as forty pounds. Then followed the desolating winter of 1870. Three-fourths of the bees cleared out, dead. Bees with a fair field averaged about fifty pounds. My best hive gave me two hundred (200) pounds. This season, the bees in the vicinity having been increased by swarms, fell off, say twenty-five per cent., from last year in surplus. My best hive, that gave me two hundred pounds last year, fell off to one hundred and forty pounds. From past results I must expect less favorable returns next season.

With such results in succeeding seasons, ought I yield to the arguments so strongly urged that there is no danger of overstocking? If there is no danger of overstocking, why do beekeepers with a few hundred colonies, divide them into several apiaries and place them in different fields?

Rev. Mr. Langstroth writes—"Probably there is *not a square mile* in this whole country, which is overstocked with bees, unless it is so unsuitable to beekeeping as to make it unprofitable to keep bees at all." I think it probable that there are few square miles of ground occupied by farmers where one colony might not be kept on each hundred acres. With a non-swarmier, with box room for one hundred pounds of honey, that amount of honey, or even the half of it, would be very pleasant to the family. I think the family should wish to try it. If two, or three, or five colonies could find an ample field on that area, so much the better. No doubt the country affords fields where a hundred colonies would do well. If I had two hundred, I should rather have two fields for them.

I remember, seventy years ago, one hundred colonies in my father's yard. At the same time his brother had about the same number in his yard, three miles from my father's. *Now* their sons, in the same fields, have not been able to exceed about one-tenth of that number. I suppose our country affords every variety of fields, from one hundred colonies capacity down to one single one. If you put a hundred colonies, where but fifty can be sustained, or fifty stocks where but ten can be supplied, or ten where only five can be supplied, you overstock your field, and a large part of your bees will be likely to perish. Either our country has not such a variety of fields, or there is danger of overstocking.

JASPER HAZEN.

Albany, N. Y.

☞ We incline to think that the unfavorable results reported above sprang rather from mismanagement or ill-adapted management, than from overstocking. It remains yet to be ascer-

tained what one colony *seasonably made populous and duly so kept*, can be made to produce in any location in one season. But the beekeepers of this country are now in a fair way of finding it out; and when that is known, it will not be very difficult to ascertain how many more *such colonies* can be kept in the same location, without interfering with each other's productiveness in the aggregate.—[Ed.]

[For the American Bee Journal.]

The Diseased Stocks.

DEAR JOURNAL:—Since the date of my hurried note of Nov. 17th, my bees have continued to die. Up to date some fourteen stocks present sad evidence of disease, while more dead bees are found on the bottom board of nearly every hive in my apiary than should be thus early in the winter. The mortality is greater among the Italians and hybrids than among the black bees. The bees fall to the bottom board in a stupefied condition, very few seeming able or willing to leave the hive of their own accord. Some, however, remain on the top of the frames, and others between the combs. I have resuscitated quite a number of deceased bees after they were subjected to three or four days of freezing weather, away from their hives. I examined the stock first alluded to, inspecting each comb in turn and as nearly as possible left out all the diseased bees. For a few days I thought the proper remedy had been applied; but it was not so, for they are now dying as before. I detected nothing wrong with the honey, but still that does not argue that the "wrong" was not there.

I concur on the editor's suggestion that the honey may contain a noxious property, but where did the bees gather it? It was not from the *fir* tribe; as there is scarcely a fir tree within foraging distance. Hence we must look elsewhere. If a portion of the honey does contain the "fatal principle," how are we to detect it, as we are not sufficiently versed in chemistry to analyze it? I shall take away the stores from the stock just affected, and give them sugar syrup, adding a small proportion of glycerine.

W. D. MANSFIELD.

Canaansville, Ohio, Dec. 11, 1871.

☞ With the above communication we received a small box containing a number of dead bees from the diseased stocks. They do not look like bees that have died of old age, and there is nothing in their appearance which indicates that they perished from any slowly operating cause; nor have they the peculiar offensive smell that attends or proceeds from foulbrood. Under the circumstances we think, with Mr. M., that change of diet is probably the most efficient means available for arresting the malady.—[Ed.]

THE *Pittsburgh Legal Journal* says:—

"Though a law paper [or one devoted to any other speciality] may be started, it cannot be kept up without money, and though a subscription is a great compliment, the payment of the cash triples the obligation."

Bees in Virgil.

Would any classical bee master kindly favor me with answers to these queries, suggested by Virgil's "Georgic on Bees" (lib. iv.) :—

1. Is it a fact that swallows devour bees, according to the lines 15–17.

"Et manibus Progne pectus signata cruentis.

Omnia nam latè vastant, ipsasque volantes

Ore ferunt, dulcem nidis immittibus escam."?

2. Have any modern observers noticed bees carrying stones for ballast in a heavy wind, (lines 194–196.)

— "et sæpe lapillos,

Ut cymbæ instabiles flucta jactante saburram,

Pollunt : his sese per inania nubila librant," as Aristotle and Pliny state?

3. Do bees live to their seventh year? (line 207.)

"Neque enim plus septima ducetor ætas."?

4. Do cockroaches devour honey in the hives? (line 243.)

5. When there is a pestilence among bees, do they hang together in a mass like a bunch of grapes? (line 207.)

6. Is any modern instance known of a swarm of bees inhabiting a dead animal, as Virgil tells us in the story of Aristæus, corroborating what Holy Writ relates of Samson? M. G. W. in "Science Gossip."

VIRGIL ON BEES.—Some years ago the statements in the Fourth Georgic drew my attention to some of the queries proposed by M. G. W. in the February number of SCIENCE GOSSIP. I have been a bee master for some six years, and as the overhanging roof of my vicarage affords ample shelter for house martins and swallows, I have had a limited opportunity of observing more particularly the conduct of those birds towards the insect. Assuming that "progne" is used in the limited sense of "swallow," as known at the present day, and that it does not refer to some other bird of wheeling flight and blood stained plumage, I am led to conclude that this bird does not feed upon bees. At all events, I have given especial attention to this very point, and not a single probable instance has come within my personal knowledge. It is worthy of note, however, that the Rev. J. G. Wood points out, as a remarkable fact in natural history, that the swallow (*Hirundo rustica*) devours the stingless bees [drones], whilst it allows the others to go unharmed, and he thinks that this fact may possibly be a proof of the instinctive knowledge of the bird. If this be true, it would lead us to qualify, at least, the poet's words. Whilst, however, one should be mindful of the difficulty of observing correctly, and of the weight of such authorities, I should be disposed to question both statements, or, at all events, to require evidence in support of them.

Honey bees, I should say, never carry "lapillos" in high winds; but there are other species, it is well known, which build nests with sand and other hard materials, and which, while carrying them for this purpose, were probably mistaken for the honey bee.

The statement of the writer in the "Encyclopædia Britannica," who says "that the bee seldom dies a natural death" must be received

with caution. Judging from analogy, the limitation of life is highly probable, for whilst it may be conceived that no individual insect of any species lives a month longer than the others of the same species, one can hardly suppose an exception in the case of the bee. Of one of my own hives it may be said *septima duceten ætas*, and though I believe that some of the very individuals which occupied it more than six years ago still form part of the population, there are nevertheless strong proofs of the truth of the poet's words, and that the first generation is rapidly passing away as its seventh summer approaches.*

The subjects of the other queries have not come within the limit of my experience and observation.—Ben Snow, Burton Vicarage, Sleaford. "SCIENCE GOSSIP."

* This writer must have "optics sharp, I ween."

Crimson Clover.

This is a forage plant certainly meriting more attention than it has yet received from the farmers in this country, many of whom seem to be very blindly attached to a fixed rotation of crops in their husbandry, perhaps because even a slight deviation makes it troublesome to rearrange a suitable course. But occasionally unfavorable weather, or the failure of a particular crop makes a change indispensable or the introduction of some other crop desirable, and it may be well to resort here, on such occasions, to that which is used elsewhere with advantage—especially when it is of a nature to subserve two valuable purposes. As an annual, producing excellent fodder and abundant bee pasturage, the crimson clover is regarded as of high importance by European farmers and beekeepers. Colman, in his reports on "European Agriculture," gives the following account of it.

CRIMSON CLOVER. (*Trifolium incarnatum*.)

This is an annual plant, presenting, in its blossoming, a beautiful crimson flower in the shape of a cone. It is a very productive plant, and is principally valuable as a green feed. Made into hay, it is deemed superior to the common clovers. Here it is sometimes sown upon a wheat or grain stubble, the stubble being simply harrowed and the seed sown, and it is then bush-harrowed and rolled. This gives a good crop for green food the ensuing spring. It is said to be a fortnight earlier than lucern. Few things in the vegetable world present a richer appearance than a field of crimson clover in full flower. It is sometimes drilled at the distance of eight inches in the rows. The quantity of seed is from eighteen to twenty pounds to an acre, when sown broadcast; less would be required when drilled. Its chief value is its quick return; as, when sown in autumn, it may be mowed so early the next season, as to leave a favorable opportunity for fallowing the land for wheat. In this respect, however, I cannot perceive that it has any advantage over our common June clover, and I should have great distrust of its endurance under the severe frosts of New England. I have tried it myself on a small scale, but then it was sown early in the spring.

Furman's Apiary.

We had the pleasure one day last week of visiting, in company with several of our citizens, the extensive apiary of Mr. W. H. Furman, of Clinton Township, and witnessing the interesting operation of honey making. Italian Queen raising, and the *modus operandi* of removing the comb, extracting the honey from it and replacing it in the hive. The party presented a decidedly unique appearance, not to say grotesque, when equipped for examining the mysteries of the interior of a bee hive; the wire hats covering the head and face, with ample curtain to protect the neck and shoulders, causing us to present the appearance of a crowd of fantasics, rather than a party of investigators of a scientific operation. To describe all that Furman showed and explained to us would require an elaborate treatise on the apiary rather than the short local item this is intended to be. So, we will only say on this particular point that all passed off pleasantly and satisfactorily. If we may except one of the party who got stung on the nose, another on the lip and several others whose attention seemed more intently directed to watching the bees flying round their heads and lighting upon their masks then to their operation in the hive. Mr. Furman has about 250 stands of bees mostly Italian, all in good working order, and which are doing exceedingly well this season, making a more than ordinary quantity of a superior quality of honey. To show the results of the labors of these busy little fellows, we give the following table of the increase of a single hive of average strength. The hive was placed upon a pair of platform scales, and the weight taken at various intervals as follows:

June 21st at 2 o'clock P. M. hive weighed 101 lbs.; removed 15 lbs.; leaving 86 lbs. In the evening the hive weighed 88½ lbs.

June 22d,	gained	8 lbs.
" 23d,	"	5 "
" 24th, (rained),	1½ "	
" 25th, gained	6½ "	
" 26th,	"	5½ "
" 27th,	"	4½ "
" 28th, Removed	26 lbs. and in the	
afternoon of same day they stored	1½ lbs.	
29th, stored	18½ lbs.	
30th,	"	10 "
Removed	22 "	

When the party was there, the hive was weighed at a quarter to one o'clock, and again at 25 minutes to 2 o'clock, and in the interval—a period of 40 minutes, it had gained one pound. This, we think, is making honey at a pretty lively rate. Mr. Furman uses the Langstroth hives exclusively and prefers them to all others. He is now engaged in removing the honey from the lower frames by the process of centrifugal motion which leaves the comb whole and the cells undisturbed. The combs thus freed from the honey are replaced in the hives and the bees go to work and fill them up again. They are thus relieved of the labor of making new comb, and the result is a great increase in the deposit of honey, while the honey obtained by the process referred to is perfectly free from all

impurities, cleaner and better than any strained honey. Mr. Furman will have several tons of honey for market this season, and will reap a rich reward for his labors. After partaking of a most excellent dinner, the party returned, all feeling (if we may except the gentleman with the hypertrophied proboscis) that the occasion was as good as a 4th of July.

How to judge the Quality of Honey.

This is an interesting question, and one we believe, not generally understood. Honey, of course, is judged *mainly* by its color. But owing to the fact that there is often a great difference in the color of the comb, and the additional fact that bees often put white honey in dark combs, and *vice versa* it is manifest that very great care must be exercised in taking into account both the comb and the honey. The proper way to judge honey is to strain it into glass jars. You can then readily judge of its color. But then there are at least two other qualities to be considered—thickness and flavor. In judging of its thickness, it is necessary for the judge to know whether that quality was imparted in the first instance, or whether it is due to the action of light; for light (the chemical rays) acts upon honey much as it does on the iodide of silver, or the photographer's excited collodion plate.

Take two bottles of honey from the same comb, seal them up perfectly tight, and keep them both at the same temperature—only, one in the sunlight, and the other in a dark room, and the former will gradually grow thick, and finally assume a semi-crystalline shape; while the other will retain its original fluidity. This is one reason why bees always work in the dark, and why honey should always be kept in the dark, or in opaque vessels.

It would be very improper to award a first prize to a jar of honey that had become thickened by the action of light, because it thereby becomes deteriorated. Still, honey to be superior, should not be very thin. Flavor is also a very important consideration, and must always be required. A good flavored dark honey may sometimes be superior to a white article which looks much better. The thickness and thinness of honey depends much upon the source from which it is gathered, rather than upon the secretive action of the bee, whether we admit that the insect *makes* or simply *gathers* it.—*Scientific Press.*

The Honey Guide.

The Honey Guide is an extraordinary bird. How is it that every member of its family has learned that all men, white or black, are fond of honey? The instant the little fellow gets a glimpse of a man, he hastens to greet him with the hearty invitation to come—Albia translated it—to a bee's hive and take some honey. He flies on in the proper direction, perches on a tree, and looks back to see if you are following him; then on to another, and another, until he guides you to the spot. If you do not accept his first invitation, he follows you with pressing im-

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VII.

FEBRUARY, 1872.

No. 8.

EDITOR OF AMERICAN BEE JOURNAL:

Please insert the article on movable frames from December No. of Mr. King's paper, so that my comments upon it may be better understood by your readers.

MOVABLE FRAMES.

Is Mr. Langstroth the Inventor?

"If Mr. Langstroth is not the inventor, who is?"

SAMUEL WAGNER.

It is not in a spirit of unkindness that we enter upon the discussion of this question. Messrs. Langstroth, Wagner, Otis & Co., have been doing all they could to injure us and our business, but we do not want to retaliate. Other motives prompt us. The state of public feeling; the earnest solicitations of numerous apiarists; vindication of ourselves, and duty to the beekeepers of America. These are some of the motives which prompt us to publish these facts, and we think that our visit to Europe, and the particular attention we have given this whole year to the history of movable frame hives, gives us ability to do it understandingly.

For centuries, the Grecians used bars in their hives, similar to the narrow top-bars now used in movable-comb hives, but Francois Huber, of Geneva, Switzerland, was probably the first inventor of the present style of movable frames. This was about three-quarters of a century ago.

Many different editions of Huber's excellent book on the honey bee have been printed in several cities of Europe, all containing plates with engravings of his hive.

Huber first made an observation hive containing a single comb, with glass on each side. As it was difficult to winter bees in such a hive, he set several side by side, removing all the glass except the paces on the outside. The bars of these frames were too wide for a single comb; after removing the glass, which led him to construct a hive with frames, having bars about $1\frac{1}{4}$ inches wide, securing them together by hinges. This was the regular Huber hive, but one plate in his book shows narrow bars resting in rabbets in a case or hive with long cereus like side bars for elevating the comb, naturally suggesting what is called the "bars and frames" in England, and "movable frames" in this country and Germany.

For nearly half a century, beekeepers advanced no farther than the use of the Grecian bars, with honey board and supers above, usually held together in Europe, because they are cheaper than wooden boxes with glass sides. Bevan and others placed one hive upon another. It is a common remark in Eng-

land that his book, "Bevan on the Honey Bee," has furnished matter for most of the later works on the subject, both in England and America. Rev. C. Cotton, an able English writer, and author of "My Bee Book," says, "A Reverend American author obtained his frontispiece—the queen surrounded by workers—from his book, but spoiled the engraving by mistaking what he intended as the appearance of the queen in the act of laying, for a representation of the queen with her sting protruding"—a very unnatural occurrence. We confess we thought croakers about similarity of names of papers came near copying book titles, when we took up a book published in Dublin, "Richardson on the Hive and Honey Bee." These works contain nearly the same matter that is found in all the late works, and one of them "The Beekeeper's Manual," not only describes and illustrates the use of honey boards and supers or bell glasses, but also the use of the *shallow chamber*, about which so much has been said of late.

W. Augnatius Munn, of Dover, England, was probably the first to invent narrow frames to be used within a case or hive. He made his first hive with frames in 1834. By 1843, he had taken out a patent in Paris, France (for the hive had been in too general use in England), and a friend using the hives had described the same with an engraving in *The Gardener's Chronicle*, a journal of large circulation, published in London (bound volume for 1843, page 317). This hive really embraced all the practical features of the movable frames of to-day. The same was also described in a pamphlet by Major Munn, in 1844, and in the second edition, 1851, he describes the same with triangular frames to lift out at the top. His descriptions, though brief, show that he was familiar with supers, and that with his oblong frames he used a honey board, the shallow chamber, and surplus honey boxes above; to all of which Major Munn has made solemn oath, perfectly invalidating the pretended claims of Mr. Langstroth.

The Russian, Prokopovitch, perhaps, should be mentioned here, for he supplied the market at St. Petersburg with thousands of pounds of honey in frames, but his frames were not used in the breeding apartment, and therefore do not invalidate Mr. Langstroth's claims, though his hive was described in a pamphlet in 1841.

We shall next mention movable frames used in France. M. De Beauvoys is the author of a series of excellent works on bee-culture. In the second edition, published in 1847, and the third in Paris, 1851, he describes movable frames containing all the features of the most perfect frames now used in this country, and we shall show by the description of the storifying system, using boxes for surplus honey above the breeding hive, that Mr. L.'s attempt to evade this

testimony is simply ridiculous, though it might do before a purchasable patent office examiner.

We wrote to Europe for these works, but all in vain. When we reached London, we found that Mr. L. had purchased copies of Mr. Munn's work, but we could find none, though our friends assured us that they would find a copy somewhere by the time we returned from the continent. When we visited Paris we found but one person of whom we had heard that we might possibly obtain a copy of M. Debeauvoys's work. We were glad to find the books in his possession, for the author had been dead some years. But our polite Frenchman, M. Hamet, declined to part with the books. We could not persuade him even to loan us the 1851 edition, though we offered abundant security for its safe return. Mr. Hamet however expressed an earnest desire that we should secure the works, and gave us the address of a publisher where we might possibly obtain them. We were successful and secured a double set of these valuable books.

When we returned to London, Major Munn nor a half dozen other friends had succeeded in finding a single copy of his work of 1851. We authorized the offer of a reward, first of one pound, to be increased to five pounds, rather than fail. Two weeks after we reached New York, and only a few days after our satchel had been stolen with one set of our French books and other valuable European documents, Major Munn's 1851 pamphlet came safely by mail.

The name of Augustus Baron von Berlepsch, formerly of Seebach, Germany, now of Munich, Bavaria, should be next mentioned among European inventors. We have the hive which he presented March 16th, 1853, to the Editor of the *Bienenzeitung* (the German bee journal, published at Eichstadt), a description of which was published in the May number for 1853. The hive is stamped with the seal of Dr. Buchner, Royal Notary Public of Munich. The document containing his oath was lost in the stolen satchel, but we have just received a duplicate similarly stamped, from which we have taken the following facts (we sent a copy of the document to Mr. Wagner, and also to Mr. Mitchell. Mr. Wagner returned the copy, refusing to publish it): The Baron of Berlepsch says, that in the winter of 1842-43, he first heard of Dzierson's hive with movable bars, and obtained a sample which he perceived to be an invention of the first rank, but still in its infancy, and that the bars should be replaced with frames. He made frames for a hive in which he put a swarm early in June, 1843, but was troubled to keep the frames the proper distance from each other. He remedied this partially in 1844, and in 1845 he left space between the frames and the walls of the hives to prevent the bees from gluing the side bars to the walls. In 1846, he and his partner, Jacob Shultze, obtained fifty glass jars or bell glasses, and thirty of them were filled in May, 1846. We saw samples of these frames, and they were exactly like the narrow frames with tops, so improperly called "Langstroth" frames, in this country. They were used with all the features—air spaces, shallow chamber, perforated top, and surplus or bell glasses above—from 1846 to 1850, when they were improved by side projections, and described in the German Bee Journal, as before stated, in May, 1853. The Baron von Berlepsch says, "Mr. Langstroth's claims are ridiculous." He heard of them in 1846, through an intelligent American beekeeper, Mr. Phineas MacMahon, from Philadelphia, who was not a little surprised to see eighty movable comb bee hives full of bees, and was told by the Baron that the frames in them had not been changed since 1851. "Now I know," said he, "that Mr. Langstroth is not the inventor, but I wonder how he heard of the frames." The Baron replied that he supposed Mr. L. got it of

Paul Reinhard Backhaus, to whom he sent hives in 1851. Lina Baroness of Berlepsch writes that she has received a letter from a son of Mr. Backhaus, stating that his father returned to Germany in 1857, and that he had much to say about Mr. Langstroth. He returned to Dubuque, Iowa, in 1860, and soon after died. We are on the track of these hives, and will produce them, if they can yet be found. We will now only briefly notice the use of

MOVABLE FRAME HIVES IN AMERICA.

There are many others who used movable frame hives in America prior to Mr. Langstroth, though many believe that Mr. L. first heard of the German frames through letters to Mr. Wagner, prior to 1852.

The first printed description of a movable frame hive published in America, was given in *The Scientific American*, March 6th, 1847, page 187. The inventor, Jacob Shaw, Jr., then residing in Hinckly, Medina county, Ohio, now lives in Shelby, Ohio, and has the same old hives in his possession. We have seen the hive, and it meets all of Mr. L.'s claims. This is but one among many others used by beekeepers in America prior to 1852.

We can only mention the names of others now. A. F. Moon, Edward Townly, Dr. Metcalf, Andrew Harbison, and W. A. Flanders, making Mr. L. only the seventh son, and it seems that he too, like all other seventh sons, has been called Doctor. We really pity Mr. L., and would gladly have permitted him to enjoy the honors claimed as his own, but the great mass of beekeepers are losing all sympathy for him since he united with his former foe, Mr. Otis, and thus made it our duty to search out the facts and make them public. Though it has cost us three or four thousand dollars, we shall not be the loser in the end, as we shall be able to bring out some improvements in bee-culture that will reward us, as well as advance the cause of bee-culture in America.

We lately returned from St. Paul, and have just learned that Mr. Otis has permitted Mr. Hosmer's case to be dismissed, and says he shall give it all up, if Mr. King has got the evidence spoken of some months since in the JOURNAL. We have now informed Mr. Otis of the facts in our possession, and hope he will be content to retire to private life, and cease to perambulate through the country, vainly trying to collect blackmail from the honest apiarians of America.

H. A. K.

H. A. King on Movable Frame Hives.

Expecting that the U. S. Court will soon pass judgment upon many of the matters referred to by Mr. King, I should not at this time have noticed his article, but for the damage it might inflict upon owners of territorial rights in my patent; so many persons taking for granted that what is not answered, must be unanswerable.

I object decidedly to the heading which Mr. King has given to his article: "Movable Frames. Is Mr. Langstroth the inventor?" because it conveys the impression that I claim absolutely the invention of movable frames, when I have repeatedly, in Mr. Wagner's Journal and elsewhere, stated that movable frames were used in Europe before my invention.

It is true, that when I applied for a patent, I knew nothing of any movable frames except those of Huber; but even after becoming acquainted with the frames of Munn and Debeauvoys, I was satisfied that mine, as described in the original patent, need not be confounded with theirs. Finding, however, that these foreign inventions were continually alleged to be substantially the same as mine, I applied for a renewal of my patent, and submitted to the office

copies of Munn, Debeauvoys, and such other works in my possession, but not in their library, as had any bearing on movable frames. In this reissue "an improved construction and arrangement of the frames of bee hives" is claimed, and the difference between this improved construction and that of Huber, Munn, and Debeauvoys, is clearly shown. Mr. King cannot be ignorant of my true position; for in his attorney's answer to the suit of Mr. Otis against him for infringing upon the Langstroth patent, he nowhere assumes that I have claimed the absolute invention of movable frames, but only attempts to show that I am not the inventor of the style claimed in the patent.

This misstatement of the very point at issue, has been dwelt upon at more length, because it so aptly ministers to the prejudices of those who have represented me as the mere introducer of a foreign invention, and yet "claiming everything," and because it is evident from his "declaration," that the Baron von Berlepsch really believes it, and deemed it important "to prove in the case of Otis v. King, that long before Mr. Langstroth applied for his patent, there were used in Germany, and the rest of Europe, hives with frames!"

Mr. King's statement, that Huber was probably the first inventor of the present style of movable frames, is incorrect, the *present style* of frames being that which inserts them in a case; whereas, the Huber frames, when put together, formed a complete hive without any case.

The reference to Cotton's frontispiece, is uncalled for, as I have in my work acknowledged my indebtedness to Mr. Cotton for this beautiful engraving. Those who have read my treatise, well know the care which has been taken to give to Bevan and others, full credit for what has been borrowed from them.

Does Mr. King accomplish anything with intelligent men, by insinuating the similarity between the title of my work and that of Richardson's except to exhibit an intense eagerness for fault-finding?

That Taylor's Beekeeper's Manual illustrates the use of honey boards and supers, is true; but Mr. King has not found in it the shallow chamber claimed in my patent. The readers of the Journal must bear with me, when I place my denial side by side with his affirmation, and remember that he has made this necessary by attempting to forestall the verdict of the proper tribunal.

It is admitted that Major Munn patented his bar and frame hive in France, in 1843; that it was very briefly described with an engraving in the London Gardener's Chronicle, for 1843, and very minutely described and illustrated by Mr. Munn in the first edition of his work, in 1844. Mr. S. S. Fisher, late commissioner of patents, and counsel for Mr. Otis, after careful examination, can find nothing in this hive which invalidates a single claim in my patent. It is not what Mr. Munn did, but what he described in some printed publication issued prior to my application for a patent, that will satisfy the requirements of the patent laws. Of this, Mr. King must be well aware, as his "answer" to the suit, *amended* since his return from Europe, makes no reference to the Major's oath.

Munn's triangular frames of 1851, were intended to remedy the defects of his oblong frames of 1844, the failure of which is acknowledged in the second edition of his work. Mr. Fisher can see nothing in these triangular frames in the least damaging to the claims of my patent, and I believe that the Huber hive is more serviceable, both for practical and scientific purposes, than either of Mr. Munn's.

We come now to the inventions of M. Debeauvoys. His frames of 1847, were made *close fitting, both to*

the sides and top of the case containing them. Could any of our practical beekeepers be persuaded to use them, even if furnished free of cost? His frames of 1851, had their tops close fitting to each other, with no plan of any kind for securing the surplus honey outside of the frames of the main bee-chamber, and even to secure the surplus there, he used a complicated arrangement of double frames, connected by rings and movable pins and staples. Although in 1853, he materially simplified the construction of his hive, he does not in the last edition of his work, in 1863, even so much as *suggest any arrangement for supers or dozers.* Mr. Hamet, the editor of the French Bee Journal, says in his work on bee-culture (1859), that the removal of frames from this Debeauvoys hive, is often more difficult than from the Huber hive, and that the hive has never been accepted by practical men in the great beekeeping districts in France. The construction of both his hives was described in my reissue, and Mr. Fisher can see nothing in them that invalidates my claims.

Has Mr. King weighed carefully the language he has used in extolling the inventions of Munn and De Beauvoys? "This hive" (Munn's) "really embraces all practical features of the movable frames of to-day." "He" (Debeauvoys) "describes movable frames containing all the features of the most perfect frames now used in this country." After asserting that these old foreign inventions had "ALL practical features," and "ALL the features of the most perfect frames now used in this country," ought he not to make a bonfire of his patent papers, and then call on all other patentees of movable frame hives to do the same, that they may no longer be engaged in the disreputable business of selling patents which have no new features of any practical value?

Passing over Mr. King's account of his long and tedious search for books (all of which, and more besides, Mr. Fisher would cheerfully, as a matter of courtesy, have loaned to his counsel), we come to the deposition of the Baron von Berlepsch. In the *Bienzenzeitung*, for May, 1853, there is no illustration given of this hive, and the "description" of it to which Mr. King refers, is in such vague and general terms, that for aught that appears, the Baron might only have used Huber frames inserted in a case. Even if the Berlepsch frames had been illustrated and fully described, they could not have invalidated my patent, which was applied for more than four months before this article was published in Germany! Mr. King, in his "amended answer," makes no reference to the Baron's hive, or to his "declaration;"* and as this answer, filed *after* his return from Europe, as regards foreign inventions is substantially the same with his *first* answer, it may be presumed that after putting himself into personal communication with the editors of the European bee journals, and with the most eminent apirians abroad, he has found nothing to allege against the validity of my patent, which had not been previously known and weighed by Mr. Fisher and myself.

We come lastly to the claims of parties in this country to a prior invention of the frames described in my patent. The claims of Mr. Shaw were for the first time brought to my notice by the amended answer of Mr. King. From Mr. Shaw's deposition, which has recently been taken, it appears that he used a metal case with double metallic water-tight

* There are some things in this document, which deserve special notice, and I cannot but hope, as Mr. King has given it to the public before offering it in evidence in the suit, that Mr. Wagner will publish it with suitable comments, either in this or the March No. of his Journal.

walls, into which he could pour a hot fluid to allow the safe removal of the frames, if the bees fastened them to the case, and that the cover of this case was a metallic reservoir filled with a fluid for drowning the bee-moth; that he only made a single hive; that he never could obtain a drop of honey from it in boxes or supers; that the first two colonies which he put in it, after remaining in it for a longer or shorter time, ran away from it; that the last swarm died in it, and that becoming discouraged, he laid it aside. Does Mr. King seriously imagine that an abandoned device, which conferred no benefit whatever either on Mr. Shaw or on the public, will aid him before the courts in overthrowing the claims of my patent?

The testimony of Messrs. Moon, Townley, Metcalf, Harbison, and Flanders, was presented when I applied for the extension of my patent. The examiner, in his report to the commissioner of patents, commenting upon a part of the testimony, says: "Such testimony on the part of the opposition, and this is representative of the whole, becomes an argument, and a very strong one, in favor of this applicant;" and the commissioner, by extending the patent, sustained this report.

In this review of Mr. King's article, I have by no means attempted such a vindication of the claims of my patent as will be presented to the court, but only such comments as Mr. King himself has made necessary that the public may not be unduly influenced before the case can come to trial.

In the beginning of his communication, Mr. King says that I have aided Mr. Otis and others "in doing all they could to injure him and his business;" and in the November No. of his paper, he says that I have been doing all that I could "to aid such men as Otis in their malicious designs against most of the enterprising beekeepers of the United States." Now, Mr. Otis is the sole owner of the larger part of the territory in my patent, but he has not, since 1867, been connected in business with me. He is attempting to get a decision from the U. S. Court, by which he can protect his rights under the patent, against those whom he regards as infringing upon them. If I should in any way discountenance or obstruct him in his appeal to the law, or if I even failed to give him all the aid in my power, would it not be a gross breach of good faith on my part, not only to him, but to other parties who have purchased an interest in my patent? Are not the beekeeping public sick of this seemingly interminable controversy about the validity of my patent? and do they not desire to have it legitimately settled as soon as possible? Had my means permitted, I should long ago have asked the courts to decide the question.

There are some other personal matters in Mr. King's article, which, before they are noticed, make it proper to quote here from my address to the beekeeper's of the United States, published in the April No. of this Journal.

"In the contest which must soon come before the courts of law, I hope that every legitimate weapon which can be used to break down my patent, will be brought forward; and I now hereby invite all the beekeepers of the United States, and all anywhere else, who may see this appeal, to send to Mr. King, against whom suit has been brought, for infringing on my patent, any information contained in books or printed publications in any language, prior to the issue* of my patent (October 5th, 1852), which seems to have any adverse bearing on my case, and to bring forward any knowledge they may possess of any invention made in this country, but not described in

print, by which the claims of my patent may be either weakened, limited or invalidated."

Does Mr. King, when suggesting that I might have bribed the patent office examiner, or that I might have conspired with Mr. Wagner to patent a foreign invention as my own, suppose that the beekeepers of this country will consider him as using the "legitimate weapons" of an honorable warfare? or that they will ever give credit to such unworthy insinuations?

L. L. LANGSTROTH.

Oxford, Ohio, Jan. 11, 1872.

Baron von Berlepsch and Movable Frames.

MR. EDITOR:—Mr. King, having procured a "Declaration" from Baron von Berlepsch ostensibly to be used in a law-suit, and having published the declaration before offering it in evidence, I desire to give the substance of it to the readers of your Journal, with such other matters as will enable them to judge of its true value.

The Baron says: "In the winter of 1842-3, I first heard of Dzierzon's invention of a bee-hive with movable combs and the next spring I hastened to obtain one of those hives.

When it arrived, I recognized at a glance that this was an apian invention of the first rank, but that it was, as it were, in its infancy, and that the bars had to be replaced by frames if this invention was to have any lasting practical value." He then states that he made a hive with frames instead of bars, and put bees into it in June, 1843. He then details the successive steps by which he learned to keep the frames separated at suitable distances from each other, and from the walls of the case. He says that "in 1845, the hive had been improved to such a degree that the frames could be easily removed and replaced," but that for want of "wings or ears on their four corners, many mistakes occurred, as often the combs would be too close or too far apart." He next relates how in 1846 he and his partner had thirty-six glass jars filled with honey, by using them as supers over his hives, and says: "with these imperfect hives I raised bees until 1850, without being able to make any improvement on the frames. In order to keep them apart at proper distances, we pressed at that time little pieces of wax between the ends of two frames."

The Baron next describes the improvements which he made in arranging the three tiers or stories of frames in his hive, and how in 1850 his partner suggested that by putting "projections of half an inch on two ends of the upper part of the frames, they could be held always in the same position and the bees would have the proper room between the combs." This necessitated the replacing of the frames without being able to turn them, but he says: "Now I had discovered what was wanting. In the winter of 1850-51, I had frames made whose upper parts had on all four ends a projection of one-fourth of an inch. Now there was no obstacle to replace the frames at your pleasure; in short, the practical frame such as it still exists to-day, was invented. Practical experience in the summer of 1851, confirmed the invention again, and in the spring of 1852, I sent to the Editor of the *Blumenzeitung* an improved hive, which was transmitted by him this year to Mr. H. A. King." *** "In view of the above, it really appears ridiculous to me that the American Langstroth claims to have invented the frames himself, and attaches such great value to the building of honey in vessels of glass and other materials by means of the bung-hole. This invention might be claimed with more right by the

*I ought to have said prior to my application for a patent in January, 1852.

Russian Propokovitch, for he had frames in his hive a long time previous to myself; they were in fact very imperfect, but still they were frames." * * * * *

"But the claims of Langstroth to be the inventor of the frames, are nothing new to me, for in the summer of 1859, I received a visit from a most intelligent American beekeeper, Phineas MacMahon, from Philadelphia, who expressed no little surprise when I showed him about eighty full frame hives, and told him that the frames had not been changed since 1851. The American then declared that now he had proof that Langstroth was not the inventor, only he wished to know how he could have heard of it, as I had as far as he knew, never published an illustration of the same."

I replied that I supposed this had been done by Paul Reinhard Backhaus, to whom I had sent some hives to America in 1851. Mr. King writes to me, "Langstroth's principal claims are the air space above the frames and the board above it with holes for passage of bees into supers (bell glasses or boxes)". That is, Langstroth's principal claims are based on the vacant space over the frames, and the cover with the bung-hole for the passage of bees into the bell glass. I can hardly comprehend how Langstroth can attach the slightest importance to such things which exist as a matter of course, for the merest beginner must comprehend that there must be at least so much space between the frames and the top that the bees can reach the bung-hole, and through that, the super. This vacant space must be at least one-fourth of an inch in height. * * * The vacant space in Langstroth's hive, as it is described in his "Practical Treatise" of 1859, is, however, much too high. This hive moreover is so bad that even the most inexperienced beginner in Germany would condemn it. I myself do this most distinctly, and declare this hive decidedly impracticable. The above shows conclusively that I used hives with movable frames and employed glass supers long before Langstroth's patent. * * * Langstroth does not seem to be familiar with bee-literature, otherwise he would know that beekeepers have had vessels of glass or other material, built full of honey by means of the bung-hole, for centuries past, a long time before the movable frame was invented." The Baron after describing the hive sent to Mr. King, so that it may be properly identified, concludes his declaration thus: "But this sort of a hive has gone out of date a long time since and in all Germany as well as in the rest of Europe, those shapes have been introduced a long time since, which I have described in my work on bees, 2d edition. It has no longer any practical value in bee-culture, but as a specimen of that first invention it will prove in case of Otis v. King, that long before Mr. Langstroth applied for his patent, there were used in Germany and the rest of Europe, hives with frames. Many witnesses can be brought who can swear to it that I have raised bees in frame hives at Seebach Castle ever since 1843, and made the improvement of these hives my special study."

Having thus given the substance of the Baron's declaration, I shall before commenting upon it, give also the substance of his communications to the *Beienenzeitung* prior to the publication in 1855, of the first edition of his work on bees.

THE BERLEPSCH FRAMES.

In a communication published in the Supplement to the *Beienenzeitung*, No. 9, May 1st, 1853, the Baron says he sends to the Editor a sample of a hive invented by him and called "*Stehender Rahmenlüfter*" (upright frame ventilator) which he regards as "the most perfect hive then known." It is said he, "partly a glass hive, a perfect ventilator and perfect Dzierzon."

In internal arrangement, he said "it is unequalled, and the inner space may be enlarged or diminished at pleasure, and every comb taken out." It is "less squat and clumsy than the Dzierzon hive, has not the cold but the warm arrangement of combs; each comb may be removed without cutting; and building them fast to the sides or bottom by the bees, is rendered absolutely impossible." Nevertheless he thought this hive would never come into general use, or exert any influence on bee-culture regarded as a branch of industry; because with all its simplicity in the view of an intelligent beekeeper, it is "too complicated and too costly for the ordinary peasant." Finally he requests the editor, if conceding the hive is what he (Berlepsch) claims it to be, "to describe and illustrate it in the *Beienenzeitung*; otherwise to consign it to his lumber garret."

In a note to this article, the editor speaks of the "*Rahmenlüfter*" as ingeniously devised, adopting and combining what is valuable in previous inventions, and presenting some advantageous peculiarities of its own, and as being "well calculated to be used with satisfaction by an expert, possessing the necessary pecuniary means." At the same time, he concurs with the Baron's opinion that the hive is "too complicated and dear," and hence not likely to come into use extensively, though it may be employed by amateur beekeepers and investigators." No description or illustration of it is given, however, and its peculiar construction could only be guessed at.

In the Extra Supplement to the *Beienenzeitung*, No. 21, Nov. 1st, 1853, is contained the first subsequent reference to the *Rahmenlüfter*, by the Baron, or any one else. It is a letter addressed to Dzierzon, censuring him for having written and published a book imperfectly explaining his system, and inadequately describing his hive. "I blame you for this," says he, "that for four years—from 1848 to 1851, inclusive—I have had in use, under the name of Dzierzon, hives entirely different from yours, and basing my judgment on those *monsters*, have spoken disparagingly of your hives and your methods, to the numerous beekeepers visiting me at Seebach, thus exposing myself to deserved derision. * * * * * I was constrained to let my carpenter work according to those nearly unintelligible intimations. Very soon I had fifty handsome single hives made (costing me more than \$300), and I began eagerly to *Dzierzonise*, but with the poorest results. Already, in 1849, doubts arose in my mind as to the correct construction of those hives, because I could seldom get out a comb without breaking it, and sometimes the whole internal structure would topple down, forcing me to conclude that your whole device was based on a sandy foundation, and the use of my so-called Dzierzons was abandoned, and the remainder were managed on the swarming system."

But your fame was constantly spreading farther, and being fully convinced of the correctness of your theory, I travelled *incognito* to Brieg, in the fall of 1851, and thence afoot to Bankwitz, carrying a small valise, finally wending my way to Carlsmarkt. There I presented myself to you as a traveling overseer from Meissen, in search of a situation, who was unwilling to miss the opportunity when passing through Silesia, to see the most celebrated apiarian of his day, and examine his apiary. As regards bee-culture, I demeaned myself as an ignoramus, allowing you to exhibit and explain everything. At a glance I saw that my hives bore scarcely any resemblance to yours, and were of course, unserviceable. I was ready to jump out of my skin, not only because of the heavy pecuniary loss I had incurred, but for the more heavy loss of four years time, and the manifest derision to which I had exposed myself. * * * * * As for the

rest, one might like the Galitzian forester, be ready to flog one's self for stupidity in not having long since hit upon your invention. How near did Huber come to it? how near Propokovitch? how near, I myself? Only think, in 1843, induced by the description and illustration of the Propokovitch hive, I constructed one in which each comb hung in a frame and could be taken out. I also cemented guide combs to the frames, and all worked exceedingly well, except that in no conceivable manner could I fasten the separate frames properly in the hive or case, made in all respects like yours with a door behind. It was, and ever continued to be, a mere juggle, like Jähne's hoop hive. Had I inserted the frames *crosswise* instead of *lengthwise*, I should have had your hive earlier than you had it yourself, and should not have had occasion to solicit Mr. Schmidt, as I now do most earnestly, to dispatch the model *Rahmenlüfter* to his lumber garret."

On this occasion, and in the letter from which I have been quoting, the Baron presents to the notice of Dzierzon and invites his criticism of his twenty-eight hive Bee Pavilion, of which he gives an extended and minute description, together with an engraved illustration.

This article was written and dated October 13th, 1853 (just one week after my patent issued), and the Baron's description of his Pavilion, does not contain a word about *frames*, nor does the illustration show any; though the latter does show *bars*, and bars with guide combs attached. We hear nothing more about frames in a Berlepsch or a Dzierzon hive, till in the Extra Supplement to the Bienenzeitung issued March, 1853. The Baron then writes to Dzierzon (Feb. 16th, 1853), "There are now no longer any *bars* in the (Pavilion) hives, but *frames* exclusively, so that the combs are suspended on all four sides between wood, and cannot possibly break down. These frames which I have had in my *Rahmenlüfter* since 1843, are by far more convenient than *bars*. With them it is never necessary to cut loose the combs from the sides of the hives (which is always a smeary job), but one can draw out the entire frame with the comb built in it. It is true these frames make the hive much dearer, for they must be made by an expert carpenter, so that they may neither warp nor part, and therefore for economical reasons, I omitted them at first in this new hive." Still the Baron did not formally advocate or defend their use till March 8th, 1855, when he appended some notes in their behalf to a communication which appeared in the Bienenzeitung of March 15th, 1855.

I shall now contrast some of the statements made by the Baron in his "declaration," with others contained in the above letters.

In his second letter the Baron speaks of having exposed himself to "deserved derision" by condemning a hive, the plan of which he never understood, while in his declaration he seems to speak as though in 1843 he was so well acquainted with it that he recognized at a glance the importance of the invention, and sought to improve it by substituting frames for bars. In his letter he says: "In no conceivable manner could I fasten the separate frames properly in the hive or case made in all respects like yours, with a door behind. It was and ever continued to be a mere juggle," &c.,* while in the declaration, he says that in the winter of 1850-51, "there was no obstacle to replace the frames at your pleasure; that in short the practical frame as it still exists to-day was invented—that practical experience in the summer of 1851 confirmed the invention, and that in 1859 he showed an

American about eighty full hives and told him that the frames had not been changed since 1851." Some of the statements in the declaration, as to the practical success of his frames in 1850-51, seem the more difficult of explanation, when compared with others made by the Baron in the Bienenzeitung for February 1853, in which he says in substance: "After I had satisfied myself by the experiments of 1851 that normally the queen is the mother not only of the workers, but of the drones also, I became exceedingly anxious to see her supply drone cells with eggs. I wished to obtain ocular demonstration of the fact. To this end, in the fall of 1854, having meantime examined properly constructed Dzierzon hives at his apiary, I made one like them, only that it had a glass door in the rear, with a wooden cover over it. It was made of such width as to suit the combs of some of my old hives; and about the middle of October, I selected sixteen combs containing a sufficient winter supply of honey, but consisting of worker-cells exclusively. There was not a single drone-cell in any of these combs. I inserted and arranged them in two tiers, one above the other, and introduced into the hive a strong colony with a young queen. In the spring of 1855, I fed them lavishly with slightly diluted honey, two weeks before the rape came into blossom; and on the evening of the 12th of May, the bees began to hang out in clusters. On the 16th I observed that on all the combs the cells not stored with honey were filled with brood. I now took out the first comb of the lower tier facing the glass door, and inserted one containing chiefly drone cells, there being only about 250 worker cells in a portion of it."

The Baron next details with all the glowing enthusiasm of a genuine naturalist, his first sight of a normal queen laying eggs successively in drone and worker cells on the same comb. Now if his frames in the summer of 1851 were a practical success, where was the necessity of his constructing a Dzierzon hive, and transferring bees and combs into it, for an observation which could as well if not better have been made in his own hive? If however, his frames were inserted lengthwise instead of crosswise, we can easily see why he adopted in the fall of 1851, the crosswise arrangement, in order that he might see the queen on the outside comb through the glass door at the back of his new hive.

I deeply regret that Mr. King, by the wide circulation which he has given to the Baron's declaration, has compelled me in strict self-defence to seem to censure a man whose name I have never mentioned without respect. It is hardly necessary for me to say that American beekeepers have such a just appreciation of the great services which the Baron von Berlepsch has rendered to apianian pursuits, that they will not judge him harshly, even if they cannot satisfactorily harmonize some of his statements.

I do not at all complain that the Baron has pronounced my claim to have invented frames, to be "ridiculous," when he supposes that I call myself the absolute inventor of frames of every kind, and the first to have removed surplus honey in glass or other supers! Believing that I have made such insufferable pretensions, he might very naturally suspect that I was base enough to patent his invention as my own.* Can any one who has read the Declaration, be at any loss to conjecture by whom he was so grossly misled as to the true nature and extent of my claims? Mr. King might doubtless not only have informed the Baron what I actually claim, but have given him

* Let any one attempt to adjust, Propokovitch fashion, *lengthwise* instead of *crosswise*, in a hive opening at the back, three tiers of frames, one above the other, and he will quickly understand the Baron's "juggle."

* I never heard of the Baron of Berlepsch until informed by Mr. Wagner, in August, 1852, of his article in the May number of the Bienenzeitung; nor of P. R. Backhaus, until the "declaration" was given to the public.

besides, the date of my application for a patent, Jan. 6th, 1853, four months before the Berlepsch hive was brought to the notice of the public. If he had done this, does any one believe that he would have brought the Declaration over the ocean?

The Baron's condemnation of my hives as "decidedly impracticable" may at first surprise those who have secured tons of honey from them; but it will not weigh much with them after they have learned from his own account, how entirely he failed, until he actually saw it, to get any proper conception of the Dzierson hive.*

If the Baron and myself could have a personal interview, I believe that all misconceptions on both sides might be easily removed. I think that he would be amused to learn that it was the sight, on the table of a friend, thirty-four years ago, of a large bell-glass super, filled with beautiful honeycombs, that induced me to purchase my first stock of bees. If we should discuss "bee literature," he would be surprised to learn that in 1790, the Abbé Della Rocca (Vol. 8. Pl. 3) gave an illustration of movable bars *with wings* similar to his own, for keeping the bars at proper distances. If we should venture upon the still broader field of *unpublished experiments*, Mr. King could speedily make us much more ashamed of our "stupidity than the Galitzean forester," by presenting to us an inventor, who before the era of Propokovitch, and while still a youth in his teens, did by one surprising bound of genius, attain results which cost us so many toilsome years of observation and experiment. And if we needed anything more to make us humble, there might be "summoned from the vasty deep," such a crowd of republican aspirants to Huber's throne, that like the despairing Macbeth, we should be ready to cry out

"What! will the line stretch out until the crack of doom?"

Another yet? a seventh? I'll see no more!"

The Baron and my readers will excuse me for attempting by a touch of pleasantry, to relieve this very dry discussion.

L. L. LANGSTROTH.

Oxford, O., Jan. 12, 1872.

*It is not unusual for men of great ability to get very imperfect conceptions from drawings, while others quite inferior in intellect, can learn as much from a drawing as from a full-sized model.

[For the American Bee Journal.]

Overstocking with Bees.

And how to secure a large income from Bee-keeping.

In one of his writings on bee-culture, the Baron of Ehrenfels states, that he owned a thousand hives of bees, all of which were so located, that he could visit them in an hour's ride; and that he moved them during the buckwheat bloom to the rich district of the Marchfeld. He seems to have written under the impression that a good location could not be overstocked with bees. He started his several apiaries with one hundred and fifty colonies, each in the spring; and keeping for each apiary one overseer or bee-master.

Lucas, another prominent beekeeper and writer on bees, in his treatise published in 1820, concedes that a location might become overstocked, if the bees of many different apiaries

should be moved to a single locality, as there might then be more bees than flowers on which they could work. At the same time he is of the opinion, that the honey secreted by a flower could be and ought to be collected as fast as it is secreted. If it was not thus collected, it would evaporate and be lost. Hence it was all the same whether a blossom was visited once or oftener during the day, and it would yield the same amount of honey at every collection; while none would be left after a change of weather, or if not collected at the time it was secreted. Is this indeed so? I cannot say that I made a close observation on any other than basswood and buckwheat blossoms. Basswood secretes its honey in five little leaflets, that constitute the envelope of the bud before blooming. These little leaflets contain, in good weather and in a good season, a drop of honey as large as and sometimes larger than a large pin's head; and a bee can gather a good load of honey from a dozen of these flowers. This honey is not washed out by a moderate shower of rain, or by dew during night time. If not gathered it is found there for a number of days, and in warm dry weather becomes as thick as the thickest honey in a hive. In some instances the leaflets containing that honey, wilt, dry up, and remain adherent in the seed bud for quite a while, and bees will visit them sometimes for more than a week after blooming. Last summer dried up honey was found in them for about ten days after they had dropped off, and bees were seen in large numbers every forenoon, collecting from them bass honey, that had become liquified during the previous night. About noon they would cease gathering, and stopped flying. I hold that this honey is of greater thickness than honey just secreted, and bees will be able to lay up in store for their owner, a larger amount if they have a chance to gather it in a locality close at hand. There can be no doubt that the area in which the bees of an apiary collect their honey, must be enlarged in proportion to the number of stocks kept; and they will be able to collect all the honey secreted every day, if there are enough bees to do so, and the honey will then have no time to evaporate or thicken. Quinby states somewhere in his "mysteries of beekeeping explained," that the pasturage for bees ought to be within half a mile of the apiary, to be of much value to them. I am willing to extend that distance to a mile; but the question is not the distance to which bees fly and gather, but how many stocks could and ought to be kept in one location, with the greatest profit to the beekeeper. Since it is evident that honey does thicken and is not lost if not gathered immediately, it must be evident, also, that the smaller the number of stocks kept in the vicinity of the pasturage, the smaller must be the ability of the bees to visit every flower, or to visit them repeatedly during the day, and the thicker must be the honey gathered. Of course the state of the atmosphere has a certain influence, as well on the secretion of honey, as on the thickening of it. Rain washes the honey out of most kinds of flowers; and we find bees lying idle after a shower, while white

clover is in blossom, whereas they continue to gather honey during a moderate rain in basswood blossom time. To come to an answer of my question, it is not necessary to investigate the influence of the weather on the secretion of honey in flowers. This is a matter we cannot change. We have to take the season as it is—whether it be a good one, or a poor one. The location of my home apiary is, doubtless a poor one, so far as gathering white clover honey is concerned; but honey in basswood blossoms is as abundant here as anywhere; and I have satisfied myself that I can secure a fair amount of surplus honey, if I aim at that, instead of working for an increase of stock or pure queen bees. Five years ago was a good season for basswood honey. My bees—at that time numbering three hundred and ninety-three colonies in my home apiary, after swarming—worked fully as lively as they did this season. The weather was as good during the time of basswood blossoms, as it was this season, and basswood flowers were as abundant also. After gathering for a week, a number of stocks were examined, and while the combs were nearly all filled with honey, the bees had just commenced sealing it. This season, when I commenced with only one hundred and thirty-seven colonies in the spring, and had during basswood blossoms only about two hundred stocks at my home apiary, the stocks I examined on the third day after they commenced gathering from basswood blossoms, had sealed quite a quantity of honey. All stocks that were supplied with boxes gave a fair amount of honey; and a number of double hives that I had erected, could be emptied every three or four days, having commenced to seal their honey. Five years ago, only a small number of stocks had made box honey, most of the hives had just commenced, when basswood blossoms were over; and on examination a week or two afterwards, I found that nearly every stock had more empty combs in the brood chamber than they needed. No doubt the thin honey had shrunk much in thickening, and the consequence was the bees had to empty some of the combs, to prepare others for sealing over. In my northern apiary, where I had only about one hundred and fifty hives that season, the brood chamber of the hives was full, and I got a satisfactory amount of box honey. Being fully convinced then that I had too many stocks in my home apiary, I concluded to start my southern apiary, with one hundred stocks taken from the former.

Last year, when I had more than two hundred hives at home, after swarming, my average yield of honey was only about nineteen pounds per hive. This year, by using empty combs enough to fill twenty double hives, and some boxes partly filled with combs, I got two thousand and fifty (2,050) pounds of box honey, and a little over four thousand (4,000) pounds of extracted honey—or an average of about forty-four pounds per hive; and I had taken from those one hundred and thirty-seven hives I started with, fifty-six divided colonies and swarms to my northern apiary, thirty-three to a location four miles east, and twenty-nine three miles

south. These one hundred and eighteen colonies gathered and stored a little over twenty-three hundred (2300) pounds of honey in the comb in boxes, and gave seventeen maiden swarms saved, besides several that went off and were lost. This amount, added to that gathered at home, would increase the average yield of the original one hundred and thirty-seven stocks at home, to nearly sixty-one pounds, by an increase of one hundred and ninety-eight new colonies.

The thirty-three colonies moved east from my home apiary, were a very weak and poor lot of stocks that had either been queenless last spring, or *artificial stocks* with only three or four combs. They gave eight swarms and a little over eight hundred (800) pounds of box honey. I am fully satisfied, that most of them would have been unable to store a winter's supply if kept at home. But where I had put them, they had nearly the whole field to themselves, as only twelve colonies besides were kept by other parties, in their range of flight.

I have often watched bees gathering honey from flowers in locations where bees were plenty. They went over them very fast, and often were followed in half a minute by others, that did not even stop for an experiment of collecting honey from the same flowers. Such bees necessarily lose much time in their search for flowers that contain honey, even if it be conceded that honey is secreted continuously during the blooming of the flowers; and then too, such honey will not have had time to thicken, and the bees will in addition, lose much time in waiting for the thickening of such honey after it has been gathered.

I well know that bees fly two, three, or four miles, in a time of scarcity, but I have noticed that the stocks gain little if any at such a time. Five years ago my Italian bees were found in great numbers in a field of white clover, three and a half miles from home. At that time they gathered just enough to sustain themselves; while about a dozen colonies kept only one-fourth of a mile from the same field were working actively in boxes. In former days I sometimes stated that during basswood time, a thousand colonies could be kept in one location, and all would do well. I have somewhat changed my mind on that point. The bees of those thousand colonies, if in good condition, would perhaps gather honey enough to winter on; but they would lay up very little honey for their owner. They would gather the honey, in their range of flight, as fast as it was secreted, and many bees would visit blossoms that had already been rifled only a moment before. The honey gathered would be a very thin article, subject to large shrinkage, after collection; and instead of still finding luxury ten days after basswood blossoms are over, every drop would be gathered when it ceased to flow. I am fully satisfied that a beekeeper would not get as much surplus honey from a thousand colonies kept in one location, as he would from one hundred. And then, outside of the basswood season, they would not be able to collect enough to feed their brood and sustain themselves. They would continually lurk around among their neighbors,

for the sake of espying a chance to steal a little, and a continual feud would be going on.

Bees, too, seem to know that there are too many of them, if a large number is kept in one location. When I had less than a hundred colonies in one location, I obtained in ordinary good seasons a swarm from nearly every hive. When I had a hundred or more, the swarming propensity decreased. Of three hundred and four (304) colonies, wintered out and kept in one location, I received only about fifty natural swarms, although I had not sought to prevent swarming. This season I had in my southern apiary, from one hundred and five colonies only sixty-eight swarms; and those colonies and swarms, with ten artificial swarms, gave four thousand (4,000) pounds box honey, and twenty-eight hundred (2800) pounds of extracted honey. After my spring's sale, I had in my northern apiary, only forty-three colonies (not forty-eight, as my daughter reported by mistake), and with the exception of a dozen colonies of second quality only—four of them queenless in the spring. They produced fifteen hundred (1500) pounds of box and thirty-seven hundred (3700) pounds of extracted honey, and increased to eighty-six good colonies. Their average yield of honey was nearly one hundred and twenty-one (121) pounds per hive, while that of the stocks in my southern apiary, nearly all of which were in prime condition in the spring, was only about sixty-four (64) pounds per hive—being little more than half as much. I have not overlooked the fact that they gave about three pounds more of box honey per hive; but their average weight per hive, when wintered in this fall, was nearly five pounds less than that of the stocks in my northern apiary. It seems therefore that a hundred colonies, in one location, are a larger number of stocks than should be commenced with in the spring.

There is no question with me any longer, that the smaller the number of stocks kept in one location, the greater will be the yield of honey from a single colony. But the question is not, how can a beekeeper secure the largest yield of honey from a small number of stocks, but how can he secure the largest income by keeping bees? In answer to this question I will say, by keeping and managing well a large number of stocks scattered in different apiaries, none of which should contain more than one hundred colonies in the spring. If he could arrange so as not to start with more than fifty in one location in the spring, it would probably be all the better. If placed three miles apart there will be no danger of *overstocking*, in ordinary seasons. A boy or girl twelve or fifteen years old can watch such an apiary in swarming time, and outside of it an active apiarian could superintend a dozen such apiaries. Of course he can only do this if the bees are worked for box honey, and everything is prepared and in readiness when wanted. But if the bees are kept to secure extracted honey, a competent person must take charge of each apiary during the honey season. If double hives are prepared before the beginning of the honey season, a good keeper might work about sixty hives, if he had

his stocks in a condition that they would not trouble him much with swarming, while busied with extracting honey.

A. GRIMM.

Jefferson, Wis., Nov. 29, 1871.

[For the American Bee Journal.]

Non-Flying Fertilization.

MR. EDITOR:—To undeceive those who have been misled, and to guide those aright who are in search of the true track, we subjoin a minute and accurate description of our arrangements and method to secure the fertilization of queen bees in confinement.

1. We build the fertilizing room, which is in dimensions six feet by eight, and eight feet high to the square. This room is studded, as though we were going to weatherboard it. We put in a frame, two feet by three, at one corner for a door. We make a tight floor, and beside plank up the sides and ends two feet high, commencing at the bottom. We now get eighteen yards of common brown cotton cloth (not too open), cut it in two pieces of nine yards each, sewing the two together lengthwise. These two widths of the cloth will cover the remaining open space not planked up, with the exception of the top and door. It is best to stretch the cloth on the inner side, putting in a tack now and then, until it is tightly stretched all around. It will take two persons to accomplish this in order to have it done right. After getting it stretched tight, lay a strip of wood or a lath over the cloth on each studding and nail it down. This will prevent the wind from tearing the cloth loose. Also tack the cloth to the edge of the plank all around, placing a strip over the edges as over the studding. Having done this much, we finish the roof by getting us a pole or studding ten feet long, which we set upright in the centre of our room, nailing it fast to the floor, and bracing it by nailing to it four braces, four or five feet from the floor, nailing the foot of each brace to the floor. We now get sixteen yards of common dark calico, have it cut into six bias pieces and sew them up, when they will be in tent shape. We leave an opening at the top for our pole, having a gum strap fastened in said opening, that it may fit *tightly* around the pole, coming down on a pin which we have put through, two or three inches from the top. We now tack the bottom edges of the calico to the inside of our frame, covering or overlapping the tip edge of the cotton cloth. We now have a house whose roof is made of calico in tent shape. We next make a tight fitting door of plank, leaving an opening near the top, twelve or fifteen inches square. This opening we cover with a piece of No. 12 or No. 16 wire cloth. In the far end from the door, and near the top of the room, we arrange a shelf upon which we place old honey combs, the cells of the upper side of which we fill with sweetened water and honey. We are now through with the fertilizing room; but have just reached that part of the programme *which is to be strictly followed, or*

you will fail in every instance. Although it may seem that all is yet to be done is merely to set in the room a colony or nucleus with an unfertile queen with plenty of drones and the work will be done, I tell you this is not so, for you may make the finest greenhouse in the world, and fill it with all the honey-producing plants, even though you have enough to produce honey sufficient for ten or twelve strong colonies, and yet you will fail to have queens fertilized therein. And why? *From the simple fact that the drone is intimidated by the presence of the fiery workers!* If you so arrange it that the drones and queen can fly in and out, while the workers cannot, you have it right. I know some of you have already said it cannot be done. Well, we shall see.

2. In the first place, we never raise our queens in little boxes, six or eight inches square. We form our nucleus in our hives, four to a hive, with three full sized brood frames to each, by using division boards—letting the bees out from one in front, from another at the back, and one out at each end. Thus they do not conflict with each other; and should you on any occasion let them fly in the air for fertilization, the young queen will seldom get into the wrong place when she returns. We raise our queen cells in the full colony, discarding every cell that is not capped over by the ninth day, and especially all the small ones. We insert our queen cells in our nucleus, and on the top of the board that covers this nucleus, we paste a piece of paper, on which we note the time when it will hatch. We now make some *fertilizing boxes* (so called). These are all made so that they will receive two brood frames each. Let the frames hang upon a small strip tacked on the inside. Have your boxes wide enough that you can easily get your finger and thumb between, to handle the frames readily. Make the bottom of these boxes of No. 10 or No. 12 wire cloth. When the frames are hung in the boxes they should not touch the wire bottom. Nail a strip three-eighths of an inch square on top of the wire cloth, all around the bottom of the box. This is to hold the wire cloth up off the brood frames, upon which we shall presently place it. We now have several queens which have just hatched. We go to a strong colony, open it, and pick out two combs that *have plenty of maturing workers with their heads sticking out of the cells.* They are making their first appearance. We shake (not brush) all the bees off; if there is *only one left*, we pick him off. *Be sure not to leave a single worker on these two combs.* We now place these two combs in our wire-bottomed box. (We forgot to say that we have a three-quarter inch hole in one end of this box, near the bottom, with a button over it). We then go to a hive that has plenty of fine drones. We open it and select (not an old drone that has been flying in and out of the hive for weeks, but) those that have light-colored heads. They are young drones, which have never yet seen the outer world; and when you turn them loose in the house we have built, they will not know but that is the dimensions of the world in which they are to play their part and die. But if you

take an old fellow, he is like a spoiled child. When you attempt to curb him he will *laugh* and attempt to get out. We put these young drones in our wire-bottom box, through the three-quarter inch hole, for it will not do to take off the cap of the box, as the young bees just hatched would crawl out. We next go to our nucleus hive and put in the young queen. Then we place these boxes over the brood frames of a *strong* colony, and let them remain there five or six days. At the end of that time, we take off the boxes with the young unfertile queens, drones, and young workers, and set them on the floor of the fertilizing house which we built at the beginning.

3. Let us now see what we have in these boxes. *First*, a young unfertile queen, six or seven days old, anxious to meet the drone. She passes in and out, three or four times a day. *Second*, we have twenty or more drones, that have never flown in the open air. They are not conscious of a larger, brighter world abroad. They fly around and around and are satisfied—even glad to know that they have such a world as this, free from the fiery old workers. Here they have it all to themselves. *Third*, we have a fine lot of young workers, *only six or seven days old*, too young by ten or fifteen days to leave the combs, even for play. Do you now think we let the queen and drones fly without the workers?

As soon as a queen begins to lay, we remove the box, making up a colony from the frames that were in them, and giving it the queen. If not, we place these boxes out under a shed, setting them on an old blanket or other woollen cloth, until such time as we wish to use them.

When we want more queens fertilized, we proceed as above. We never leave any of those boxes in the fertilizing house till the workers begin to fly out. Herein is the *whole secret of fertilizing in confinement*: **KEEP OUT THE WORKERS.** We know that when the queen meets the drone on the wing naturally, the workers are far beyond, at a distance, sipping nectar from the flowers. During the month of June, when we have thousands of drones, if you wish to know where the *drone yard* is, take the course that your bees are flying from the apiary, and by the time you have traveled six or eight hundred yards, you will come to a place where the whole atmosphere seems filled with bees. No man ever heard more buzzing. Some would think that a large colony of bees was passing overhead. No, they are the drones from your apiary. Here are tens of thousands of them. When your young queen leaves the apiary, she takes the same course, led by the hum of both workers and drones. On and on she goes, and before she is aware of it, she has reached the desired haven. But do you find any workers flying around in this locality? None, not one. They are all far beyond, in the fields.

Now, brother beekeepers, I fear I have wearied you; but it takes considerable space to explain this non-flying fertilization, so as to make it fully comprehended. Although I have been very particular to describe it in detail, I doubt not some will fail to understand it, for I know that it is next to impossible for half a dozen men

to read an article, and all understand it alike. If there are any questions to be asked, please ask them through the Journal, between this time and the first of April, as I shall be too busy after that date to furnish answers. When any man tells you he has had queens fertilized *in the hive*, and *four at a time*, just tell him from me that he says—what's not true.

No man ever yet contracted the entrance to his hive and let out the workers, and kept the *unfertile queen from coming out*, and thus had her fertilized in the hive. If he did, all I have to say is that he either has larger young queens than I have, or his workers are smaller than mine. It can't be done! I have had many queens fertilized, last season, by the foregoing method, carrying out every manœuvre just as I have presented them; and my old fertilizing room now stands in Mr. Moffett's yard, in Trimble county, Kentucky, where I had my apiary the past summer. But whether I will build one here at Franklin, Ky., is not yet decided. I think I shall not have use for one, as I find but few colonies of black bees near me, and these I will Italianize early in the spring.

W. R. KING.

Franklin, Ky.

[For the American Bee Journal.]

Novice.

MR. EDITOR and BEE JOURNAL FRIENDS in general: We are most happy to announce that our late indisposition has so nearly disappeared, that we are enjoying perhaps as good health as we ever did before. We are in fact feeling so jubilant over restored health—"that greatest earthly blessing"—that we can hardly refrain from persecuting even our friends of the Journal with some account of the way in which it was brought about.

For eighteen weeks our sole diet was lean meat, principally beefsteak; and for fourteen weeks we did not taste even so much as a crumb of bread, nor any vegetables of any kind. Of course brisk out-door exercise was absolutely necessary to digest such a diet, and when unable to walk or work, riding was kept up forenoon and afternoon, almost constantly.

After about twelve weeks, not only a pound of pure beef at a meal, but even four pounds per day, were eaten with pleasure; and when our physician informed us that we could safely take vegetable food once more, we did not care half as much about it, as we did the first month. We were told that the safest vegetable food to be taken at first was "cracked" wheat, or wheat ground in a coffee mill and boiled in simply pure water, with a little salt, of course. Our physician advised using a little butter; but we took the liberty of adding a little honey (remember that we had tasted none—not even a drop of anything sweet—for nearly five months), as we had a few jars of clover honey, put up in June, 1870, that was so thick it could be cut with a knife.

We find ourselves so well satisfied with the

above diet that we now eat scarcely anything else, except that and beef, and only hope that our readers will find it half as delicious, on trial, as we do, as we can finish almost any quantity with impunity for breakfast or dinner. We are allowed only beef for supper even now. We cannot speak as favorably of any fruits or vegetables. When we add that our weight increased seven pounds and a half in *seven* days, on the above regimen, we hope no one will accuse us of having a "passion" for steel-yards and spring scales.

Is it possible that any one can have faith enough in what we have just narrated, to be benefited thereby? That much abused "good old Dame Nature" will cure us of all ills as willingly as she mends a broken bone, if she only has *opportunity* and *materials*, is a fact which we fear is but very imperfectly realized.

On page 187 of the December number of the Journal, Jewel Davis asks for more precision in regard to our queen nursing. We certainly should have said—"You can thus cage all the cells in a hive, that would be available in the patented queen nursery, or by any other means." We hope owning a patent has not made him unskilful with unpatented devices.

On page 162, C. T. Smith, we fear, did not make his cages carefully, nor put them in place securely. When we described the device, we had given it a pretty fair trial, and had kept a number of queens caged thus until old enough to let their sister queens get fertilized and commence laying. Then they were removed and used, and the next in age released, and so on.

We always push the wire points past each other, which were then waxed together, so that they could not well fall out, and we cannot remember that we had any trouble in that way. After the yield of honey ceased, they "quarrelled" some, as we have before mentioned. If those who succeeded, and those who did not, could *all* reply *this minute*, we should like to hear the result.

We certainly did not intend to speak of the queens we got from Mr. Grimm, in a fault-finding spirit. We were much pleased with them, considering the season in which they were reared (which we were informed of before buying), and the price we paid. We really were not aware until reminded, how our brief statement of our decision to send to Mr. Langstroth for a queen, seemed to reflect on those we purchased from Mr. Grimm.

Mr. Hazen's fear, on page 187, of overstocking a locality with a dozen hives, or less, sounds strangely as if he had read our Journal with insufficient care. When we had a dozen hives or less, our yield was nothing near, per hive, what it is now every year with over sixty. And

WHAT WE CANNOT DISCOVER

is a single instance, where large apiaries are yielding less, per hive, than small ones. We will try and not think this article too was written solely with a view of eliciting inquiries in regard to his patent hive, that the large results mentioned refer to.

HURRAH FOR GALLUP!

Old hats and new, give them a full vigorous swing and "three cheers," and HURRAH again!

Why, old fellow, what makes you so modest? Do you really mean to say that you have taken six HUNDRED (600) POUNDS of honey from one hive in one season, and been so quiet about it? Why we are going to make such a fuss, that you can hear us from "Maine to Mexico," when we beat it, next summer.

You don't tell us half enough about it. You gave them combs, you say; but really, now, *did you give them no brood or young bees*, as Mr. Hazen does? We have no fears that we can produce a *ton*, if that course be allowed.

We would like to state it thus—How many pounds of surplus honey can the progeny of one queen produce in a season?

One matter we almost forgot. Mr. Hazen speaks of bees starving on account of overstocking. Bless his heart, has no one ever told him that we now give our bees their winter supplies, as a farmer provides for his cattle and sheep; only we simply take about as much trouble to do it as would require to stack up the quantity of hay that an animal would need over winter, and turn them in the lot to keep themselves. Does he consider *feeding* "violence" too? After the several hundred pounds his bees have given him, does he let them starve? Does the "society for the prevention of cruelty to animals" not include insects among the objects of their care? If they do, oh, my! what a task they will have!

Mr. Editor, do we find too much fault? Somehow we fear our pen runs too much that way; and for that reason, in fact, we decided not to say a single word about the *Cleveland convention*, just to check any such lurking disposition. There was much *there* that we were pleased with, and many persons whom we were glad to meet, and things that we would not have missed under scarcely any consideration; but now look here, old pen, you'll just get yourself flopped away on the shelf, if you don't shut up. It's no business of yours if Mr. King did forget to tell us how he "loved Mr. Langstroth," as at the Cincinnati convention; nor why he changed his mind about being secretary, after publishing to the world in his paper, flatly that he wouldn't *no how*.^{*} Of course he knew nothing derogatory to Mr. Langstroth's fair name, until he found that that gentleman could neither be *bought* nor *driven*; nor did he then, until he went to Europe with the *fixed determination* to "hunt up something!"

Once more, old pen, is it our business to start up. If the mass of beekeepers are satisfied to pass it all without notice or comment, why should we? If King's conventions are painful to us, we won't go to any more—that is, if we could only tell when he was going to preside.

We are sorry to see Mrs. Tupper's remarks on artificial swarming reported so different from what she did say—especially the latter part, which we fear would be rather exhaustive even

to Iowa bees the past season. We presume the reporters did not notice it before it got into print.

And now, brother beekeepers all, hurrah for the rows of—not jars, but—barrels of honey this time. "Our better half" suggests *clean white barrels*. Whiskey barrels don't look well.

Barrels of honey for 1872; one from each hive, and from Gallup's hive two!

NOVICE, AS OF OLD.

[For the American Bee Journal.]

Notification.

MR. EDITOR:—Allow us, through the Journal, to inform its readers and save them the trouble of writing to us, that we are out of the Italian bee business and have neither queens nor colonies for sale. Six years' experience has satisfied us that we can make a more profitable use of our bees than to use them to breed queens at present prices. Hence we have withdrawn from the business, with the intention of never resuming it, except perhaps to accommodate a few personal friends with queens, when we have them to spare.

In this connection, we wish to say a few words in relation to our experience in buying queens, and to give

CREDIT WHERE CREDIT IS DUE.

We have bought quite a number of Italian queens; we have bought them both in the United States and in Europe; we have bought them of several different parties, and paid for them prices varying from seven francs to fifteen dollars, each. While, as a general rule, we have been fairly and honorably dealt with, and good queens have been sent to us—some of them valuable ones; justice to Mr. Langstroth requires that we should give him the credit of sending us the best and most valuable queen we have ever received, judging her by her prolificness and the uniform high color of her queen, drone, and worker progeny. We have bred queens from her to the fifth generation, with the same uniform high color of the workers from each succeeding generation of queens. We consider this a test of purity that is perfectly reliable, no matter how highly colored the queens, drones, and workers are.

WANTED!

In the summer of 1870 we had two queens not more than two-thirds of whose eggs would hatch workers; the remaining one-third would produce drones, though deposited in worker comb. We are in want of such a queen next year; and if any reader of the Journal who has one during the season of 1872, will send her to us by mail, we will reciprocate the favor in any way he may suggest. It is immaterial to us whether the queen is pure Italian, black, or mixed.

J. H. TOWNLEY.

Parma, Mich., Dec. 20, 1871.

☞ A queen that has been very prolific, will usually, when superannuation approaches, de-

* "*Nolo episcopari*," is the cry of every hypocritical schemer. [Ed.]

posit eggs in worker cells, a portion of which, gradually increasing in number, will produce drones. She is almost certain to do this largely, if the period of superannuation happens to be in May or June:—The supply of spermatazoa in the spermatheca of such a queen being nearly exhausted, many of her eggs, though laid in worker cells, pass without impregnation. That such queens are unconscious of impotence in this regard, while they may have a foreboding of their impending fate, is evident from their continued oviposition in worker cells exclusively.—[Ed.]

[For the American Bee Journal.]

Transferring Bees.

There are, all through our country, great numbers of bees still in box hives, and some even in the old-fashioned hollow log, which, by the way, is just as good, or a little better. Many of our people have not yet discovered that to make beekeeping pay, the bees must be in movable comb hives. But they are waking up, not only to the importance of bee-culture, but to the necessity of having their bees under complete control.

Those who are not informed on the subject, regard it as a very formidable undertaking to transfer a colony of bees, stores and all, from an old hive to a new one; but those who have experience in it, find it unattended with difficulty. To be able to do it in the easiest manner, however, is quite an accomplishment in the beekeepers' art; and knowledge and skill have not yet made such advancement that improvement may not be made by the interchange of experiment and observation. And, with your permission, Mr. Editor, I will give some of the results of my little experience.

After trying nearly everything recommended for holding combs in place until the bees fasten them in frames. I have fallen back upon slender strips of wood held in place by wire. The strips should be made of tough straight-grained wood, and should be a little more than an eighth of an inch square. They should be long enough to reach a little above and a little below the frames, and have a notch in each end to receive the wires. Tough wire should be used, stiff enough to hold the sticks somewhat firmly, and yet not too stiff to be easily wrapped around the ends of the sticks. The wires should be cut about three inches long; half of the sticks should be counted out and a wire attached to each end of each stick, by two or three turns of the wire around it, in the notch, and then they are ready for use.

I use a transfer board, having blocks nailed on it to hold the frames in place while the comb is being filled in. It has also grooves to receive the sticks, which are to be fastened on the lower side of the frame as it lies on the transfer board. My frames being only twelve inches wide, I use two pairs of sticks to each frame. When every thing is ready, I lay down two of the sticks having the wires on them, in the grooves of the

transfer board, and lay the frame over them. The frame is prevented from getting out of place by the small block, nailed to the board. Having cut out a piece of comb of suitable size, I lay it on the frame, or, if not too wide, put the upper edge within the frame, pressing it against the under side of the top bar, and with a sharp knife trim the projecting edges of the comb, so that it can be forced down into the frame. This is much better than to lay the comb on the board and after having marked and trimmed it, spring the frame over it. It is quicker and more easily done, and there is less danger of injuring the comb. When the comb is in place, I lay two sticks having no wires attached, immediately over the two that are under the comb, wrap the ends of the wires around them, and raising up one end of the transfer board to bring the frame to a perpendicular position, put it into the hive.

Unless a hive is very populous, and the weather warm, I do not take the trouble to drive the bees out before transferring the combs. I smoke them pretty well before removing them from the old stand, giving them time to fill themselves with honey. I then carry the hive to a convenient place, set it down bottom upward, drive the bees down with smoke, and with a cold chisel cut the nails, and take off one side of the hive, so as to expose the combs to the best advantage. The tools needed, besides hatchet and cold chisel, are a long-bladed carving knife and a three-eighth inch iron rod having at one end a steel blade bent at a right angle, and about one inch and a half long from the angle to the point; and at the other end a handle such as is used for small chisels. This tool is about twenty inches long. It is used for cutting off combs which cannot be conveniently reached with a knife.

Four or five heads of broom corn tied securely and firmly together, are better than anything else I have tried, for brushing bees from the combs.

After placing the first comb in the new hive, I brush all the bees on combs subsequently cut out into it, that they may cluster on any brood it may contain. When all the combs are in the new hive, I shake the remaining bees down in front of it, let them go in, and then place it on the old stand. It is well always to place an empty hive, or a box of some kind, containing a piece of comb from the hive, on the old stand to receive and retain the returning bees, until the work is done. It is better that the comb contain unsealed brood.

I have transferred bees in March and in November, and in nearly every month between, and have never had them do otherwise than well. I have had less trouble with robbers in March and in October and November, than in May and June. It is not a good plan to transfer many colonies on the same day, unless it can be done in a house that will exclude robbers, as all the bees in the neighborhood will, after awhile, be attracted by the exposed honey.

M. MAHIN.

New Castle, Ind., Dec. 23, 1871.

[For the American Bee Journal.]

Notes of a Beginner.

MR. EDITOR, and beekeepers generally, *greeting*:—The honey season is past, and ere this we have all counted our profits, if not in dollars and cents altogether, then in bees and honey; and many a sweet morsel we shall enjoy during the winter. Some of us, too, are doubtless able to supply others with a portion, provided they pay for it. I say *us*, for I number myself now as a beekeeper, or at least as beginning to be. Though I have to acknowledge some failures, during the past season, yet, taking it altogether, as I had never handled a bee before, I am quite well satisfied with the summer's operations—which sum up as follows:

Commenced with 18 stocks, in almost	
all kind of hives, at a cost of \$8 each,	\$104 00
27 hives, at \$2 each,	54 00
2 queens, at \$2.50 each,	5 00

Total,	\$163 00
--------	----------

An increase of 13 stocks, \$8 each,	\$104 00
Increase in value, by Italianising,	55 00
600 lbs. of honey, at 20 cents per lb.,	120 00
1 swarm from the woods,	8 00

Total,	\$287 00
--------	----------

The balance, \$124, may go to pay for time.

I do not give these figures because they show very great profit, but to give facts. I do believe that while a few will reach such figures as Novice and Grimm, the majority of beekeepers will only attain to a less amount. But, of course, in order to progress, each must strive to be one of the successful few.

NOVICE'S QUEEN NURSERY.

Immediately on receipt of the Journal, I made several, perhaps a dozen of these nurseries; but succeeded in saving only two queens by them. I guess I must have bungled somewhat; but Novice did not tell us how he had succeeded. Will he please tell us whether he has been successful with them? Novice says, after removing the wire cages, the combs would be uninjured. Now, in my operations the bees would in every case gnaw the comb on the inside of the cages, and the old ones on the outside; so that sometimes a piece of comb would fall out on removing the cage.

INTRODUCTION OF QUEENS.

I have been almost uniformly successful in introducing my queens this summer, by simply removing the black queen and immediately caging the Italian queen, and putting her between the combs at the top. In about twenty-four hours I would release her without any further ceremony, except that two or three times I used smoke or sweetened water. I also mixed up my bees, by changing frames, bees and all; and had no fighting but twice. Late this fall, however, I used chip smoke to unite my nuclei.

LANGSTROTH'S METHOD.

I would here say, that upon two occasions I found a young queen, just hatched, perhaps not over five hours old. I at once sought for and destroyed a black queen, and immediately without any ceremony, put her on a frame, holding it in my hand. She was well received, and has now a fair stock of bees as her progeny. They are hybrids. The other was introduced to a nucleus, from which I had taken the queen just a short time before. She was received without any molestation, and in due time given to a full stock.

THE HONEY EXTRACTOR.

I do not know but I overdid the thing by the use of my extractor. I did not get it finished as soon as I wished, so that some of my stocks were full of honey, and waiting for me. I think my figures would have been larger if I could have used the extractor earlier. I emptied most of the stocks twice. The second time about the middle of July. At this time most of my bees seemed to resent this kind of treatment, not by stinging, but by a sulky behavior. They seemed to stop working with their usual energy; yet they continued to work some till the last of July and August, but not to give me any surplus. Not suspecting that all would not be as well as could be, I did not examine them till some time in October. I then found no brood or eggs, and they were not as well stocked with bees as I should like them to be. But, still, all seemed to have honey in plenty. Now I suspect I ought to have fed them some in July; and this I acknowledge is my fault, for Mr. Langstroth gave me directions in full, in *Hive and Honey Bee*, but I did not follow it out to the letter.

A BEGINNER.

The writer's name became detached from his communication, and lost. Will he favor us with it?

[For the American Bee Journal.]

Satisfactory Results.

MR. EDITOR:—Once upon a time I promised the readers of our Journal that I would make a report of the season's operations (1871); but after looking over the reports of some in former numbers of the Journal, my faith in my ability to make the best report for the season was somewhat "dampened." For instance, when I read Katie Grimm's report, I thought "How wonderful is man" and the honey slinger, and yet how much more wonderful is a woman with such energy and strength! Indeed, my three hundred pounds of honey for one day's work, sunk into utter insignificance in comparison, and yet I am very well satisfied with the results of the season in my own case. Now for the figures.

The spring of 1871 found me in possession of twenty stocks of bees, about one-half of which were blacks, and the remainder Italians and hybrids. Five of the number came out of winter quarters so weak that I received no profit from them in swarms or honey. These colonies I built up without any aid from other stocks; and four

out of the five commenced with only two combs each, in the spring. From each of the five I have taken two queens, forcing them to supply themselves with others from sealed queen cells; and they are all now in prime condition for wintering, with their hives full of combs and bees.

Wishing to get all my stocks Italianized this season, from the other fifteen colonies I formed twelve nuclei for raising queens to supply my new swarms and Italianize my natives. This I succeeded in doing, without trouble; have sold about forty dollars' worth of queens to my neighbors, at reasonable figures; and am wintering ten queens in their nucleus hives, seven of which are purely fertilized.

My honey account for the season, stand as follows:

Pure white basswood honey, extracted, 700 lbs.	
Mixed and dark, " " 200 "	
In small frames and boxes, 600 "	
In large frames, in upper story, 200 "	

Making in all, 1700 lbs.

The fifteen colonies have given me, besides, an increase of twenty swarms, all of which are in winter quarters in good condition.

In extracting I only operated on my old colonies, and such of the new ones as had been supplied with empty combs, except where I extracted from new combs for queen raising. And, by the way, I get much finer queens from new combs than I can get from old.

My honey I have sold at from twenty-three to twenty-eight cents per pound—averaging fully twenty-five cents.

The profit for the season would foot up as follows:

For honey sold (1200 lbs. at 25 cents per lb.),	\$300 00
Honey still on hand (500 lbs. at 25 cents), 125 00	
Queens sold,	40 00
Twenty new swarms, worth \$10 each, exclusive of hives,	200 00

Making a total of \$665 00

Or, an average of \$44.33 per colony.

The colonies from which I extracted most freely, gave me the most box honey this fall, and are in much the best condition for winter, being better supplied with bees hatched late in the season. From this summer's experience with the extractor, I have come to the conclusion that, in a season like the past, all the honey we can get with the extractor is more than clear gain. J. E. BENJAMIN.

Rockford, Iowa, Dec. 15, 1871.

[For the American Bee Journal.]

Timber for Honey Casks.

A correspondent of the Journal asks for information on this subject. I put my honey in gallon oaken casks, and do not perceive that they impart any taste foreign to the honey.

MR. GALLUP—WHERE IS HE?

Let's hear a word. There are some of us

(who did not send the dollar, of course,) who are waiting patiently for the promised description of his bee-hive. I am particularly interested, for I adopted the form given by him in the Journal some time since.

I bought up some stocks this fall, so that I have now in my cellar thirty-eight stocks in good condition, according to my poor judgment, and I am waiting anxiously for the end of a long winter, when the little workers will show how they have borne confinement. Till then, adieu. H. H. PHELPS.

Pine Island, Minn.

[For the American Bee Journal.]

Report of Progress.

DEAR JOURNAL:—We always welcome your appearance on our tables, for well do we know that we shall gain some useful knowledge from your pages. How sorry we felt for Novice, when reading his article in the November number, and found that even he can get into trouble. Taking warning from his sad experience, we appointed ourself an investigating committee of one, and entered on duty at once. As we had used our extractor rather late in the season, we examined those hives first that we had taken from last, and found they had filled the empty combs about half full. These we had placed in the centre of the hive, as we returned them from the extractor. (*Was that right?*)

The past season was a good one for bees in this locality. They worked busily on buckwheat and smart weed until it was killed by the frost.

We commenced the season with twenty-six (26) stocks, and increased our number to forty-eight (48), and reared about seventy-five (75) queens. Our yield of surplus honey was not great, yet we found our stocks all in good condition for winter, except a few late swarms, which we supplied with full frames kept in reserve. Now, thought we, all are in good condition for winter, and dismissed the matter from our mind, giving our attention to visiting friends. But on moving our stocks to the cellar, we found that one weak one which we had supplied with honey had been robbed, and the bees were dead. We also found another stock dead, with abundance of honey. The bees were clustered just below the honey, some had crept into the cells, while others were clustered over them. Can any one tell us what killed those bees?

All our bees are Italians except some few hybrids. We have sold queens, bees and honey to an amount of one hundred and forty dollars, and have considerable honey on hand still. We sell all our honey at twenty-five cents per pound.

Flattering ourself that we had been rather successful in queen rearing, we determined to procure imported queens, and to be certain that they were imported, we concluded to play importer for once. Some time in August we ordered a package of eight queens from Edward Uhle. We waited with patience till the 12th of October, when they arrived by express. There was no time lost in bringing them home, and with

no small degree of anxiety did we proceed to examine box after box. To our surprise and joy we found every queen alive. We expressed one to a friend, and now came our trouble. Seven valuable queens to be introduced, and so very late in the season!

Yet the trial must be made. We caged the queens, destroyed those of the stocks, and immediately hung the cages containing the strangers into the several hives, left them thus four days, then raised the cages and tied over the top of each a bit of newspaper smeared with honey, replaced them, and left the bees to liberate the queens at will. On examining them ten days after we found each queen lively and perfectly at home among her American subjects.

If we are successful in wintering them, we shall be able to furnish pure Italian queens to all who may favor us with their orders next season. Having been successful in importing we shall continue to make new importations from time to time, in order to keep our stock good.

MRS. K. A. D. MORGAN.

Pella, Iowa, Jan. 8, 1872.

[For the American Bee Journal.]

Report of a Season's Work.

MR. EDITOR:—Not having very much to do at present, I thought I would give the readers of your valuable Journal some account of my last season's operations.

On the first of May I found all my stocks in the weakest possible condition. There were forty-eight colonies in all, having lost twelve during the winter and spring from having forced queens. I raised several queens the previous season, and by the first of June every one was dead. Hence I consider forced queens of but little account, as I bought several such, and never had one to live a year from the time I got her.

Thus on the first of May I had forty-eight stands. They were so weak that I only got seventeen swarms from the whole. The first swarm came out on the ninth of June, and the remainder afterwards, up to the tenth of July. The first swarm gave me one hundred and twenty pounds of honey, and my bees, old and young, sixty-five stands, averaged me nearly eighty pounds of honey each. About one-half of this was extracted, for which I got fifteen cents per pound. For box honey I obtained twenty cents per pound. From the 1st to the 15th of August I took all the honey from each and every hive. After that they had nothing to work on but buckwheat. Some twenty-five stands made from eighty to eighty-five pounds of honey each. That is they filled their hives, which required from forty-five to fifty pounds, and filled besides some twenty-five boxes with from thirty-five to forty pounds each—all from buckwheat. The rest filled their boxes full and put from ten to thirty pounds in their boxes. Every hive I have on the place has rather too much honey, as they are not wintering well, and this is the greatest trouble I have in wintering bees. I have seen it

stated by some that their bees did not get enough honey to winter on. Now such a thing I have never known here. My pasture is all artificial now, but I have sold my farm and bought another in the grove, some six miles to the south. Here I am going to put out a large pasture, such as alsike clover, mellilot clover, and buckwheat. There are plenty of thorn bushes, wild plums, crab apples, elm, maple, and hickory trees, and not less than one hundred acres of basswood or linden trees within a mile of this location. If there is any honey in linden I expect to get some. I think I have the most favorable situation for bees that could be found in a long travel.

R. MILLER.

Malugin Grove, Ill.

[For the American Bee Journal.]

A Few Inquiries.

MR. EDITOR:—As the time has come around for my subscription I wish to ask a few questions.

1st. At what time does the "basswood" blossom in Central Illinois? I live on the prairie several miles from timber, and never saw basswood in bloom. I am thinking of planting a grove in the spring, and should be pleased to hear from parties having basswood trees for sale.

2d. At what age does the basswood tree begin to yield honey? Our honey supplies in this locality consist mainly of white clover, buckwheat and Spanish needles. In wet seasons bees have abundant pasturage, but in dry ones they "go for the grapes" and any other fruit that suits their taste. There are hundreds of pounds of grapes destroyed by bees in this neighborhood in the past two seasons.

Our town site is one mile square, and there were about four hundred colonies of bees located on that area last season, but owing to the drouth and the great number of bees, I fear a portion of them will fail to take wing in the spring of 1872.

I would also like to ask Mr. R. M. Argo if he kills more bees when manipulating his close fitting frames than he does when using frames that hang half an inch apart.

I close by proposing three cheers for Gallup and the American Bee Journal.

S. W. LOUD.

Virden, Ills., Jan. 8, 1872.

✂ We doubt whether the bees injured the grapes as charged. We have never yet been able to find one attacking a sound ripe grape, peach, or other fruit, though we have often seen them appropriating the juices of such as had been injured by wasps, or other insects, or birds—thus making themselves useful by gathering up and saving what would otherwise have been lost. Let grape growers and fruit culturists use their own eyes carefully in watching birds and insects, and they may be undeceived. The recently introduced European sparrow, however valuable it may possibly prove to be, as a caterpillar exterminator, is almost certain to do more damage to vineyards in one season than bees have done since the day that Noah became a vigneron.—[Ed.]

[For the American Bee Journal.]

Introducing Queens; or the Grand Modus Operandi.

MR. EDITOR:—Having tried many of the plans given in the Journal for introducing queens, I found there would still be some failures occasionally. Now here is a way that has proved sure every time: Make a box of the same dimensions as the hive, six or seven inches deep; nail on a board for a bottom; on the upper edge tack on cloth to prevent the escape of smoke; bore a hole through one of the sides to blow smoke through. When operating, set the hive on this box; then load your fumigator with puff-ball, and proceed as Mr. Quinby directs, and drop the bees. Look out for the queen, if she was not destroyed before you smoked the bees. The better way is to kill the black queen before smoking them, as then they do not need to be smoked so much. Have ready another box, about three inches deep, with bottom, and inch holes through its sides, covered with wire cloth, to let in fresh air. Put the bees in this box and set the hive over them. When the bees revive, and begin to climb up, put in your Italian queen, and keep the bees confined till next morning. They should also have upward ventilation.

Can some one tell me, through the Journal, how to keep my bees from swarming? I would rather have honey than swarms.

The past season was not as good as last year. My bees made one-third less honey this year than last.

PETER LIVINGSTON.

New Salem, N. Y., Dec. 28, 1871.

[For the American Bee Journal.]

Report from Pratt's Hollow, Madison Co., N. Y.

MR. EDITOR:—The commencement of our season here was poor, but by the 20th of June the bees began to get honey pretty freely, and so continued until the first of August, as our season ends early with the basswood bloom.

I hived one large swarm on the 16th of July, and in fifteen days they filled a common box hive and six 5 lb. boxes. I think I never saw bees get honey faster than they did this year from the basswood blossoms.

I began the season with twenty-five colonies. They increased to forty-five, mostly by natural swarming. I took from them—young swarms and all—nine thousand eight hundred (9,800) pounds of box honey, including weight of boxes, and sold it in that form at an average of twenty cents per pound.

I doubled a good many of my young swarms. I think that those I thus doubled averaged me sixty pounds of box honey per hive, while those that I hived singly did not average over fifteen pounds to the hive. Will it not pay to double young swarms, where they can be bought in the fall for five dollars each? I can buy plenty of black bees in this county, in box hives for that price.

I think the golden willows are a great help to bees in the spring. I was at my father's in Oneida county, about the first of May. There are a great many of those willows there, and I think his bees came in as loaded from them as they did, here from the basswoods. This year the bees got such a start from the willows, that they commenced swarming as soon as the apple trees came in blossom, or say the 18th and 20th of May.

My best colony, this year, of black bees in a box hive, gave me one hundred and fifty (150) pounds of box honey. A good many of the boxes had a considerable amount of dry comb in them. I think I can get one-third more honey in that way than by single capping. My best half-blood colony gave me one hundred and twenty-five (125) pounds of box honey, with only the natural start combs in the boxes.

I had a few Italians and half-bloods. They commenced swarming about one week earlier than the blacks.

My bees were mostly in box hives. I could have got more from them if they had all been in shallow Langstroth hives. I am making a hundred Langstroth and a hundred Quinby hives for the coming season.

Probably twenty of my swarms went to the woods. One large swarm that I had trebled, started work in the hive, and continued about forty-eight hours, then left for the woods without alighting. I expected a hundred pounds of honey from it, if it had stayed.

G. T. FEARON.

Dec. 29, 1871.

[For the American Bee Journal.]

Queens, and Corresponding Hives,

On page 114 of the November number of the Journal, Mr. Benjamin says he feels sorry for friend Gallup. Now, save your sorrow, friend B., for we can stand any amount of such *pitching in*. But the amount of correspondence that I had before I sent that article charging the dollar, no live man could possibly stand. Those same chaps that have done the pitching in, would like to have Gallup devote his entire time to correspondents, and then kick him for not doing more. Still, this is not what we started for in this article. It is about that queen's laying herself to death in our Youreka, Back Action, Extractor, Reversible, Revolvable, Movable Comb, Twin Bee Hive. It is a well known fact, that some queens will lead out a swarm, fill a standard hive, lead out another swarm, and fill that hive, still lead out a third, and fill that hive also. And with us, such prolific queens are almost invariably long-lived. We have had them retain their full prolificness the fourth season, and do as well as a majority of queens still in their fifth season. But, suppose your figures are correct, and on my principle a queen will produce the workers to gather eight hundred (800) pounds of honey in one season; or, on the old plan, it takes her three years to produce the same result; we say, let her spread herself. There may be something more here

yet, that you have not thought of. We once removed a large swarm of bees (from a house) that had been there a number of years, and they had a queen as large again as a common one. Again, we removed a swarm from a large bass-wood log, and found the old queen a tremendous large one (not as large as an ox, but large for a queen). We also found extra large queen cells, and made three extra large swarms from the old log. Queens and queen cells were extra large, that were raised in our large colonies last season. The bees seem to expend large amounts of wax on the cells, and place an extra large amount of food in them. D. L. Adair, in his "Outlines of Bee-Culture," says, on page 13: "*It is found in practice, that the queen is more prolific in a hive where she is not crowded for room to deposit eggs, and the whole population is more industrious.*" And on page 17, he says: "*Queens raised in full sized chambers, are larger, more prolific, and live longer.*" &c. In practice, certainly, we agree with Mr. Adair. If this is correct, then, in an extra large colony, we can raise extra large queens to meet the emergency. So far, so good. Right here, we will say, that Mr. Adair's section hive is used in just as many forms, with the same size frames or sections, as we used in our hive. We obtained some valuable suggestions from him and his hive at the conventions last winter. After using the extractor, we formed an opinion of what we wanted for a hive, and we went to the conventions chock full of our ideas, and Mr. Adair was the only individual we found there that had formed the same opinions; or if others had, they kept them to themselves. We do not intend to use large hives exclusively, but in connection with our standard hives.

E. GALLUP.

Orchard, Iowa, Dec., 1871.

[For the American Bee Journal.]

Virgin Queens becoming Drone Layers.

One year ago last summer, I had at one time secured so many hatched queens and maturing queen cells, from stocks that had swarmed naturally, that I had a queen in each of my one hundred and three (108) nuclei then running, and quite a number of queens left which I preserved in nuclei that had no fertile queen. In a number of instances those extra queens were neglected or killed by the workers, as soon as the queen at liberty became fertile. A small number, however, was saved in such of these nuclei as had lost the queens at liberty, during their wedding flight. Much occupied, then, by other pressing work, I did not liberate those queens until they were fourteen days old. They were readily accepted by the workers, and I noticed some of them making their wedding flight the same day they were liberated. Three days afterwards I examined the nuclei containing those queens, and found five of them fertile and laying. This was on the seventeenth day after they were hatched. A few days later I had occasion to fill a large number of orders for un-

tested queens, and shipped those five among others. Think of my surprise when I found the progeny of all those five queens was drone brood in worker combs! Of course I had to send other queens immediately; but this turning drone layer at so early an age, was contrary to all my former experience. A queen that had hatched on April 4th, at the time when I wintered out my bees, did not commence laying until the forty-third day of her age, and laid worker eggs exclusively in worker cells for three months and a half, when she commenced intermingling some drone eggs among worker brood, and was then superseded. Three other queens hatched on April 15th, and at liberty in their hives, commenced laying drone eggs exclusively on the 23d day of their age. At one time in the month of September I had forty-five queens, none of which were impregnated, on account of cold, rainy weather prevailing, over three weeks old. The weather had changed, becoming fine and warm, and all these queens, except a few that were lost or killed, were impregnated in the course of two days, and became regularly fertile.

If the above reported experience of young queens becoming drone layers when caged fourteen days in warm weather, should be confirmed by further observation and corroborated by the experience of other queen breeders, it would seem to be established that virgin queens could not be kept long in cages or queen nurseries without detriment, even if they should not be neglected or killed by the bees in whose hives they are placed for preservation. I find, however, that worker bees that have a prolific, fertile queen in their hives, will try their best to destroy virgin queens kept in queen nurseries or cages—probably apprehensive that their own queen was in danger.

A. GRIMM.

Jefferson Wis., 1871.

[For the American Bee Journal.]

In Peace Prepare for War.

As there is not much to be done now that our pets are snugly stored away in their winter quarters, perhaps dreaming of better days, probably now is the most favorable time to mature our plans for the coming season.

We have read carefully the Journal for 1870 and 1871, and have been expecting to see somebody recommending for the management of bees, a plan like our own, or one very similar; but as we have not seen anything quite like it, we will give it for whatever it may be worth.

Mr. Editor, this is no new fangled thing. We have practiced it for the past ten years, with the best results. Like many readers of the Journal I am located where forage consists almost entirely of white and alsike clover; and those situated like myself will be the ones that will be benefitted by my plan. Every beekeeper knows that, in such locations, the time for gathering honey is very short—at longest not more than sixty days. Now, if you expect much surplus,

you must have very populous stocks to gather it. Then comes the question, what do we consider strong stocks? Well, we consider a hive that did not swarm, a good stock, generally giving us a good surplus; and yet even such sometimes fail to come up to our standard. But we will now try and give you our plan for making working swarms. Let me here remark that my experience has been with black bees and natural swarming. The past season I introduced about twenty Italian and hybrid queens.

And now, Mr. Editor, for example, I have on hand fifty-four stocks, provided all come out right in the spring. Suppose these all send out a swarm each, fifty-four in number—what shall I do with so many swarms? I have only twenty empty hives, and am determined not to make any more, because it is *honey* that I am after, and if I should double my stock, I should not get honey enough to grease a pan-cake.

I will now try to explain how I manage. A few days before swarming commences, I locate all my empty hives in my yard, just where I want them to stand through the season. I have all swarms in a basket hive as they issue, and carry them to the hives designed for them. Do not forget to mark day and date on every hive both old and young. We will now take it for granted that you have already hived eight new swarms. Well, if any of them have been hived three, four or five days, it makes no particular difference, though we prefer four days. Now introduce another big swarm in each. But a neighbor tells us we could not put two of his swarms in one of our hives. Moonshine! We never had two swarms in our life, but we could make room for them, and keep them at work too, when anything sweet was to be found abroad. But we are off the track again. Well, we said put in another big swarm. But we want a fair fixing—half a dozen platforms, four feet long and three feet wide, made of inch boards. Nail two strips on the top, one at each side to project two inches, to clamp on the bottom board of the hive to be doubled up. A board, of course, is nailed at the other end, which makes it level with the hive that is to receive the swarm. Now, when you have nailed a lath on each side of your platform, to keep the bees from falling on the ground when they begin to scatter; one thing more, and we are ready for action. Raise the front of the hive that is to receive the swarm one inch. Of course, you have during the day taken off the honey board and covered the top with neat and handsome glass boxes. Our hive accommodates forty-five pounds in six boxes; or if the extractor is to be used, put on the upper story. All being in readiness, bring along your swarm in an old box hive, for as a matter of course you did not have them in a frame hive, because it would be quite a job to shake them out of the frames. Now, with one jerk drop the bees on your platform, one foot in front of the hive to run them in. They will scatter all around for a minute or two, but do not disturb them till they begin to travel for the hive; then keep them moving till all are in. The next morning set the hive level, but still raised on all

sides, three-eighths of an inch from the bottom board.

The reason why you want several boards or platforms, is, that you can be doubling up six or eight swarms at the same time, and you will do it in half an hour. One thing must not be forgotten—this operation must be done after sundown, and when it is nearly dark. The swarms will then unite without the loss of a single bee. Now double up all your new swarms as fast as possible, for every day counts. At the same time keep making new ones, till you have used up all your hives. We take it for granted that you have now made fifteen new swarms all doubled up thirty single ones; and providing all your stocks send out a swarm, you have twenty-four to come yet. Well, we will try to find a place for them, where they can be made useful. We will now return a swarm back to every one that has swarmed. And here the question is often asked—what do you do with the extra queen? Well, if I had any use for a queen, I should preserve her; or if I had a choice of the two, I should keep the best. But in this case I have no use for queens, so she may pass in with the swarm, and next morning you can have a funeral. But we are going astray again. We said we should send back a swarm to every old stock that had sent one out. But, if it can be avoided, do not return a swarm to the hive it came out from. We have returned hundreds of second swarms back to their own hive; but in this case, an old queen still under the swarming impulse, will sometimes lead the swarm out again. Now for further operations. You have to-day four swarms, of course in box hives, and let them stand just where you hived them till nearly dark; but during the afternoon you prepared four old stocks to receive them. I mean by this, that you have destroyed all queen cells to be found in said hives. If so, put on your surplus boxes or upper stories; bring on your platforms and douse the bees thereon. Shake all four swarms out on their platforms, and by the time you get back to the first one, the bees are making for the hive. With a little brush of some kind keep them moving till all are gone in. If, when you have returned a swarm to each old stock, the swarming still continues, make one or two more new swarms, till all are disposed of.

Now you have what we term a lot of strong swarms, not here and there one in the yard storing, as in most cases where swarming is allowed and every swarm hived separately; but every one storing surplus. How is that for high?

It may be, if the season is a good one, that some of your first hived double swarms may send out a swarm in about four weeks. If they do, our plan is to catch the queen, return the bees and let them raise a young queen. This has never failed with us. Give them plenty of room to store surplus honey, and you will not be troubled much with swarms.

A brother beekeeper suggested to us last season that Italians and hybrids will not bear handling and doubling like the black bees. We

shall give them a fair trial the coming season, and should such prove to be the case, we do not want them, as we are not prepared yet to believe that a single swarm of Italians will store as much honey as two swarms of blacks.

It may be that some beekeepers will object to this method of ours, in returning the swarms to all the hives that had sent out a swarm, destroying all the young queens, and returning all the old ones. Now, Mr. Editor, we honestly confess that we were a little skeptical on this point ourselves, for the first two or three seasons; but time has proven to us that it made not a particle of difference. Our stocks are to-day just as good as they ever were, and we think even better. Our loss in queens has not amounted to more than one in twenty-five the year round.

And now, Mr. Editor, light your pipe* take the American Bee Journal, and sit down in the shade, where you can watch these stocks, as the bees fly out in all directions from the hive. It will make you smile; and you may just bet your old boots † that if there is any honey to be found, you will get your share. We have never had a season so poor since we adopted the plan, but a little double swarm would fill the hive with combs and store honey enough to last till spring. But we have known plenty of singly hived swarms starve before the first of December.

The past season a brother beekeeper condemned our plan on the ground that such a quantity of bees put in one hive, will invariably build too much drone comb. But it must be remembered that the swarm was hived four days before it was doubled; and if the weather was good the greater part of the combs are then already built or well started. But we have not been able to discover any difference. Some stocks build more of such combs than others. But do not be alarmed; the working force of your hives will be ample so long as the flowers last, and they will go into winter quarters with all the bees you need. In fact, we have sometimes thought the hives contained too many bees to winter well.

Our esteemed brother Ezra Rood, of Wayne, Michigan, paid us a visit last season, in swarming time, expressly to investigate our plan. We demonstrated to him our best Grecian style, and he went home as he said to put it in practice. As we have not heard from him since, we do not know how he likes it. Brother Townley of Parma, has practiced this plan, more or less; but as he has been extensively engaged in raising queens, we think he has not fully carried it out.

We also visited brother Temple, of Ridgway, Michigan. He has a large apiary, and after talking with him, we explained to him our method. He promised to try it, and at the following State Fair, held in Jackson, he told us, if he had known this before, he could have sold

hundreds of dollars' worth more honey; and he is another convert.

But, Mr. Editor, we have spun a pretty long yarn and will try to close. We should feel more at home holding the plow-handle than writing articles for the Journal, because many of its readers have forgotten more than we have ever thought of.

About hives we have nothing to say. We use a well made box, with frames. Cost about seventy-five cents. Two coats of paint, and the nail holes puttied up. We are a jackknife carpenter, and do our own work. We think very loud sometimes that if men would study bees more and fixings less, they would get more honey.

We have forgotten to mention one thing that has been useful to us. In swarming time it often happens that two swarms go together, and they prove more or less troublesome till one of the queens is killed. We have often had them swarm out two or three times, before finally concluding to stay. But we manage them in this way now. As soon as such swarms are hived, set the hive in a shady place on the ground, of course with a board under the hive. Raise the hive all around on blocks one inch thick. Now take any kind of thin cloth, having no holes or rents in it. Spread it over the top of the hive and reaching down to the ground. Pull the bottom of the cloth out tent-like, and lay stones or bricks on the loose ends, or anything that will keep all tight. Be sure that no place is left where a bee can get out, and they will remain perfectly quiet. By next morning one of the queens will have been destroyed; then put the hive on its stand, and all will be right.

If we have an unruly swarm we tent them out till sundown; then unite it with some other; and the trouble is at an end.

Long live the American Bee Journal, and may it see many happy new years.

J. BUTLER.

Jackson, Mich., Dec. 28, 1871.

[For the American Bee Journal.]

To Prevent Combs from Breaking.

The following is the way I prevent the comb from breaking while using the honey extractor, in cold weather, in fall or winter. It works with perfect satisfaction to me.

I use a zinc can with a tight cover and a hole near the bottom to let the honey out of. It is through this hole that I admit the steam. First I shave the caps off of two combs, put them in the can, and put on the cover, then having a common tea kettle boiling on the stove, I raise up the can so that the steam will enter at the aforementioned hole, turn the comb gently for three or four minutes, and then you may turn as fast as required without the least danger of breaking the combs. This is much better, and far less trouble than letting the combs stand in a warm room two or three hours.

J. PICKERING.

Brampton, Ontario, Canada.

* *Fumigator*, if you please. We do not now smoke. [Ed.]

† Not worth a dime! [Ed.]

THE AMERICAN BEE JOURNAL.

Washington, February, 1872.

✍ Ill health during part of the past month, prevented us from giving the Journal the usual attention, though we flatter ourselves that we have managed, notwithstanding, to make up a very readable paper.

✍ On the 14th ult., a subscriber mailed to us at Byron, Mich., a letter enclosing two dollars, but omitted to give us his name. Whom shall we credit?

Another subscriber, writing from Ipswich, Mass., on the 8th ult., enclosed two dollars, but likewise failed to give his name. In his case, we ventured to guess. If wrong, will the writer please correct us?

✍ Mr. G. W. Childs has sent us a copy of the PUBLIC LEDGER ALMANAC for 1872, containing a large amount of statistical and other information, in a condensed and compact form. The almanac is not for sale anywhere, but ninety thousand copies of it were printed by Mr. Childs, to be presented to subscribers to (Philadelphia) Public Ledger.

✍ Mr. A. Gray, of the firm of Gray & Winder, Cincinnati, Ohio, intends going to Europe in the spring, to procure a supply of pure Italian queen bees for his own apiary. He will also take a limited amount of orders from others desiring such queens, to be sent to them by express from Cincinnati on his return. Terms \$15 per queen. Orders accompanied by the cash, either in registered letters or post office money orders, should be addressed to him prior to March 15th next. Mr. Gray is an experienced bee-breeder, and will no doubt, make careful selections.

✍ To Mr. Langstroth's exposure of H. A. King's operations, and his dispassionate and dignified notice of the Baron of Berlepsch's Declaration, we need not invite attention—the interest felt in the subject will command it, of course.

✍ We purpose next month to insert the Baron of Berlepsch's Declaration, into the making of which he was unwarily entrapped by the wily misrepresentations of H. A. King. We reserve, till then, any remarks we may have to make with reference to it.

✍ A slight error occurred in the January number, in our reference to Mr. Langstroth, which, though of not much importance, we desire to correct.

Instead of "Before the spring of 1853 we never heard of Mr. Langstroth," read "Before the autumn of 1851." We then first heard of him from the late Rev. Dr. Berg; but we never saw him or had any conversation or correspondence with him till after the 1st of August, 1853, as we stated last month.

✍ The preposterous absurdity of claims made now to having invented movable frame hives twenty-five or thirty years ago, must be evident to every candid man, who reflects for a moment on the prerequisites which the intelligent use of such frames involves; and who is aware of what was the highest advance which practical bee-culture had reached in this country, when Mr. Langstroth made his invention and published his book. We have no hesitation in saying (and doubt not that all thinking beekeepers, old enough to know the facts as they then existed, will agree with us), that when Mr. L. invented his frames, and before he published his book, there were not three men in the country (unless instructed by him) who could have used a movable comb hive intelligently and successfully, if one had been presented to them ready stocked. Beekeepers had to be educated to use the frames—that is, they had to learn how to manipulate with them, before they could manage them with any prospect of success. Many, very many intelligent beekeepers, long accustomed to manage bees in common hives, tried to use them, and failed, because they relied on mere practical skill, without having previously qualified themselves, in some degree, by studying the science and theory. Hundreds, subsequently very skilful and successful operators, well remember the day when first they ventured to undertake the job of opening a hive and removing a comb crowded with bees; and many laughable stories have we heard from the lips of such, when detailing their unlucky experience and frequent discomfitures.

And now, men, who still occupy only *back seats* and the *lower forms* in the schools of apiculture, come forward and claim that they, *even they*, invented those frames a full quarter of a century ago! Why, they might as well claim to have invented car-buffers and couplings, railway switches, and track-laying machines, a lustrum or two before George Stevenson dreamed of the first locomotive that ever run by steam! Such people should reflect for a moment how preposterous their pretensions are, ere they commit themselves so egregiously.

CORRESPONDENCE OF THE BEE JOURNAL.

LOS ANGELOS, CAL., Dec. 23, 1871.—Bees have been able to fly and work up to this time, with the exception of about five days, it being rainy. But they found little honey since the last of August, as the weather was very dry. Vegetation is, however, starting finely now, and bees will soon have plenty of honey. There are a number of beekeepers here that have one hundred or more colonies; but the AMERICAN BEE JOURNAL and improved bee hives are not known to them.—J. BECKLEY.

LUCAS, MO., Jan. 6, 1872.—Bees laid up a good supply, and to spare, of liquid sweets this season. I had only eleven stands or colonies; and they averaged *two hundred and forty per cent.* profit the past season, above expenses. "How is this for high?"

Many of my farmer neighbors complain because the money-lender asks twenty per cent. for the use of his money, and say they can't make that at farming. Bees are the fellows for me. They board themselves and work for nothing.—DR. D. L. LEWIS.

SOUTH ROYALTON, VT., Jan. 8.—We did not have an average yield of box honey, in this section, the past season, and next to no swarming. A large portion of the box honey was of poor quality, dark, and bitter, the product of "aphides" or plant lice, and the so-called honey dew. In some towns, however, bees did well, storing a fine quality and a fair amount. Four-fifths of the beekeepers are using the Langstroth hive, *pure and simple*; and the remainder are fast coming into the ranks.—D. C. HUNT.

WINCHESTER, VA., Jan. 8.—Our bees started in the spring as finely as we ever saw them; and with the abundance of fruit bloom we had, I looked for many swarms. But out of eighty colonies of black bees and eight colonies of Italians, I had only two swarms of blacks and two of Italians. They worked finely on white clover, alsike clover, and blue thistle, until the 15th of July. After that time, I do not think they made any honey, as I put one stand on a pair of scales, the 20th of May, and they never increased an ounce in weight after the 15th of July. The largest amount of honey stored in one day was three and a quarter (3¼) pounds on the 5th of June. The largest amount of honey got from one stock of black bees was seventy-one (71) pounds; and the largest amount from an Italian stock was one hundred and six (106) pounds, in twelve pound boxes with glass sides. I use the Langstroth movable comb hive; and like it better than any I have ever tried. I have never had my colonies heavier in honey than they are this winter. Some of my friends recommend me to take some of the honey from them, but I think I shall let them alone.—B. F. MONTGOMERY.

VERMONTVILLE, MICH., Jan. 9.—My success has been indifferent, thus far; and my bees, I find, approximate closely to the cost of Horace Greeley's turnips. I have sixteen colonies in my apiary, all in Langstroth hives; one colony of pure Italians, the remainder blacks. I hope, however, to be able to give you a better report hereafter.—H. J. MARTIN.

BLAIRSTOWN, IOWA, Jan. 15.—I have kept bees for only two years. I commenced with three stands in box hives, on shares, and put eleven in movable frame hives, in my cellar this fall. I use the Langstroth hive, only *deeper* than the usual form. Mine are 14 inches wide, 15½ deep, and 11½ high. I like this form better for this windy prairie.—H. D. MOELLER.

[For the American Bee Journal.]

Tennessee Apiarian Society and Outside Talk.

MR. EDITOR:—In the December number of the Journal, Mr. W. R. King, of Milton, Ky., in speaking of the Apiarian Exhibition at the Tennessee Agricultural and Mechanical Association Fair, recently held at this place, in which he had entered his "Triumph" hive, says:

"As I was a stranger, and a long way from home, I kept quiet and looked on, listening to outsiders, and it was the general talk that the Tennessee Apiarian Society did not intend that the Langstroth hive should be beat, for their President owns the State of Tennessee for that hive; besides, they had adopted it, as a society,

and they mean to hold on to it, no matter what better hive may be shown them."

Now, as this does very great injustice to the Tennessee Apiarian Society, I desire, as a member of this Society and as one of the superintendents of the Apiarian Department, to totally deny that any such feeling existed in the Society. My relation to the Society is such that such a question could hardly be discussed where I would not hear it, as I probably see more of the members between times of meetings than any other member, and I can assure Mr. King that I have never heard one word spoken, as *outsiders* inform him. The only thing that gives the least plausibility to any partiality for the Langstroth hive, is the fact that, some three or four years ago, the Society adopted a resolution *recommending* the use of the Langstroth hive. At that time the right to this State was owned by Mr. Otis, and not by Dr. Hamlin, the President of the Society. He only purchased the right of the State about one year ago. There have been additions to the Society since then, and no one has any right to infer what hive would be endorsed by a vote of the Society now. And right here a few facts in regard to the status of some of the members of our Society will go far to refute the *outside* talk referred to by Mr. King. The Vice President of our Society prefers the Adair hive; another member of the Society uses the Adair hive, and owns the patent right for this county; another uses what he calls the "Tennessee Improved" hive, which was in competition with other hives at the Fair; and still another has an invention of his own (a side-opening and side-surplus ~~box~~ hive), which he uses exclusively, and will introduce it soon. Two others use both the "Buckeye" and the "Langstroth" hives; and two others use the "Alley" and "Langstroth" hives. To any one acquainted with the number of active members of our Society, this will be conclusive evidence that they are not so wedded to the Langstroth hive as to turn out in a body to prevent any other hive from taking a premium.

Now I have not the least doubt that Mr. King heard just such talk as he states, for I have heard the spirit of it myself, but I doubt if it was very *general*, or if a single person, not interested in other hives spoke of it.

There is a certain hive in use in this part of the country, called the "Buckeye." Two or three years ago, at the Fair held at the same place, the Langstroth hive, entered by Dr. Hamlin, took the premium over the Buckeye. The Buckeye parties chose to believe that this premium was awarded to the *man* and not to the *hive*, Dr. Hamlin being the most prominent apiarian in the State, and they have declined to enter their hive for premium since. I do not allude to this to open any discussion as to the fairness or unfairness of the award, as it was before my bee days; but only to account for this present *outside* talk Mr. King heard, so much of. I have several good friends interested in the "Buckeye" hive, and after I was appointed one of the superintendents of the Apiarian Department, knowing their feelings about it, I tried to induce them to exhibit their hive, honey, &c., for

two purposes—to make a large exhibition in my department, and to prove to them that they should have fair play. I thought the result of my assurance was that they would exhibit; but on Fair day I found that they still declined to do so, and were still of opinion that no one but Dr. Hamlin could take a premium; and it is not at all improbable that Mr. King heard outside talk as he states, but is the Tennessee Apiarian Society, or Dr. Hamlin, responsible for such unfounded prejudice, or for the Doctor purchasing a hive on which he can take premiums? Why do not these persecuted friends join our Society and outvote and outtalk the Langstroth members, if they choose. They have been repeatedly invited and urged to do so, but they seem to seek martyrdom.

Now the awards of premiums at this Fair prove that everything is not cut and dried for the Doctor's benefit, as intimated, but that he stands on his own merits, like the rest of us, for of the three premiums taken by Dr. H., two were without competition, and of the three entries by the Doctor, when there was competition, he only took one premium, and that was on his Langstroth hive.

This was my first experience at any fair, either as a manager or exhibitor; but knowing the squabbles that so often arise over awards of premiums, I determined and prided myself on my efforts, to have everything done most fairly. It was the duty of the superintendents of each department of the Fair to appoint committees in their respective departments, and as my co-superintendent, Dr. H., was an exhibitor in every item in the bee line, and I only in one, namely, "extracted honey," he turned the entire matter of committees over to me, without any suggestion as to the make-up of them, more than to express the hope that it would be done in a manner to give every one a fair chance, as he wanted nothing more; and I, when it came to premiums on "honey," delegated Mr. King to make up the committee and superintend the awards, which he did on a day when I was not on the grounds at all.

In making up the committee on hives, the name of every one, with that of the hive he used, was laid before the exhibitors for their approval, and all agreed that the committee was satisfactory. Some of them were entirely unknown to me until that moment. Each exhibitor then explained the merits of his own hive, except Dr. Hamlin, who, being one of the superintendents, thought best to allow his employee, Mr. Ladd, to set forth the merits of his hive. I did not see Mr. Barnum on the ground.

Of the committee of five two were members of the Tennessee Apiarian Society; and one of these two, notwithstanding he uses the Langstroth hive, voted for King's "Triumph" hive. It is proper to state that Mr. King's hive is not in use here, and his exhibition at the Fair was our first sight of it.

As to the charge that the Tennessee Apiarian Society will hold on to the Langstroth hive, no matter what better hive may be shown them, I will merely say that we are too smart for that. The only earthly interest we have in any hive is

in the one from which we can get the *greatest yield of honey*; and if it is demonstrated that that can be accomplished by lodging our bees in a pumpkin, we will all use pumpkins.

I have necessarily made this communication rather long, but my apology is to place the Tennessee Apiarian Society in its proper light, to do justice to the officers of the Fair, and to assure Mr. King that it was not a cut and dried affair on the hive question, notwithstanding outside talk. And I herewith leave my statement to the judgment of beekeepers interested in the honor of their co-laborers, if Mr. King did not have fair play.

J. W. FISHER.

Nashville, Tenn., Dec. 13, 1871.

[For the American Bee Journal.]

Report from Hartford, Wisconsin.

CROWFOOT BRO.'S APIARY.

In May, 1869, we had two hundred and one colonies of bees, mostly Italians. It was such a bad season that we lost by actual starvation forty-nine colonies in the summer, and put up only one hundred and fifty-two in the fall. In the spring of 1870 we took out only thirty-two, and of these we lost eight before the 1st of June. We let them increase to eighty-two that summer, and got about seven hundred pounds of honey in boxes. By June, 1871, they had decreased to seventy colonies, and in the summer of that year we had thirty natural and fourteen artificial swarms, and obtained by weight fifteen thousand (15,000) pounds of extracted honey, and a little over one thousand (1,000) pounds of box honey. Some of our colonies have now over one hundred pounds of bees, bee bread, honey and combs per hive. We think there will be about four thousand pounds of honey in the hives in the spring, which we can take out, but this is only guess work. If it should prove to be correct it will make in all a little over twenty thousand (20,000) pounds of honey from seventy colonies, besides the increase in swarms. You are at liberty to publish this, but we have no time to answer letters of inquiry. We have stated facts, and that must do.

CROWFOOT BRO.'S.

Hartford, Wis., Nov. 30, 1871.

[For the American Bee Journal.]

Winter Reared Queens.

Away back somewhere in the Journal, some one asked what Dr. Gallup's opinion is about queens hatching in winter and becoming fertilized in spring. We have had such cases ourselves, and have already given our ideas of them in the American Bee Journal, but will now give them again, along with some other information. Our idea is that queens hatched in midwinter remain to a certain extent comparatively dormant; or, in other words, their age does not advance. The editor says on page 9 of No. 1, vol. 1, to this

effect: in autumn and winter bees may be said not to grow older, though advancing months in age. Last fall I received an Egyptian queen from Mr. A. Gray, and being anxious to see her progeny, I commenced stimulating and got three cards filled with brood. When that brood hatched out, or soon after, the Italian bees were all used up or dead with old age and labor. Whereas if they had been left to themselves they would have lived until their places had been supplied with young bees in the spring. In two cases I have changed black bees all to Italians in September and October, simply by stimulating to rear brood then, and it is a well known fact that if left to themselves at that season there would have been any quantity of blacks remaining the following May, and but very few Italians in the fall.

By the way, we were to test the working qualities of these Egyptians. So far I prefer the Italians, but their fighting qualities are excellent. E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

The Proposed Improved Hive.

MR. EDITOR:—On page 120 of the American Bee Journal for November last, Mr. Condit gives us an article on "Improved Bee Hives," in which he says that a hive which costs five dollars is too expensive for a majority of beekeepers; and one which costs but a single dollar, if so made that it is not easily manipulated, &c., is too cheap for any beekeeper.

Thus far I agree with Mr. C. He then says 2,000 cubic inches is believed by the most successful apiarians to be capacity sufficient for a large colony, for breeding purposes and storing winter supplies. He goes on to describe his cheap hive of *thirteen* frames, the dimensions of which are 19½ inches from front to rear, 15½ inches deep, and 12½ inches from side to side, which makes a hive of over 8700 cubic inches.

Why does he want to go so far astray from the most successful apiarians, making his cheap hive almost double the proper capacity?

Now I beg the privilege of differing with Mr. C. about this shaped hive being easily manipulated. Any beekeeper who has ever handled frames knows that it is difficult to lift out a frame from a full stock when the frames are fifteen inches or more deep. But when the frames are *close fitting* at the top, and 15½ inches by 19½, it is indeed a formidable undertaking to remove them.

I am not partial to a side-opening hive; but with such sized frames as Mr. C. describes, and close-fitting at that, I think we should want a "side-opener."

I have used the movable frames for fifteen years, and find the Langstroth hive, with frame *ten* inches deep, just the thing for this section. And if I were in Tennessee, or still further South, I would prefer them still more shallow. My experience is that the bees winter in them fully as well, if not better, than in deeper hives.

When we remember that Mr. C. writes from

Tennessee, where the bees can fly out, more or less, every week in the year, I cannot see why he objects to the Langstroth or other shallow hive, unless he has an *axe* to grind (even if it be only a twenty-five cent one).

I am confident that the Langstroth hive, with its large amount of surplus honey room, is just the thing for the South; and it does not cost "~~five~~ dollars" either.

Let us take another peep into Mr. C.'s hive, and see if there are not other objections to it, with all its "cheapness." In the first place, it is too large (3700 cubic inches); but we will admit he can control the size with his division board. So, too, can we with the Langstroth hive, the Triumph hive, or almost any of the patent frame hives, or non-patented ones either. They all use the division board to contract the size of hive, to suit smaller swarms, or for queen raising.

Mr. C. says his bees work out at *each end* of his hive, or crosswise of the frames. Now, when we stand by the hive to open it or take out the frames, the most convenient place to stand is at the side of the frames. This, in this case, would be the front of his hive, which would be a great annoyance to the working bees when returning heavily laden from the fields.

He says, to secure the largest amount of honey we must use the Extractor. Well, his frames are *close fitting*, consequently are *one and a half* inches wide, and the combs are usually about seven-eighths of an inch thick. So that when he puts them in the Extractor, the wide frame will hold the comb off from the supporting wire; when the machine is put in motion the comb will break out, and he will have a "sweet" job to fasten them in again.

Then, he has a *cross bar* in the center of his frames, which is objectionable, as that is the place where we want *brood* and not wood; and to leave out his cross bar, his frame is too large and *deep* to handle or extract, and as the combs are usually not fastened at bottom, they would break down.

How does Mr. C. propose to ventilate his mammoth hive? When full of bees, in warm weather, there would be heat enough in it to almost roast a sirloin of beef. His frames are close fitting at top, so that no heated air can escape; and there is no cooling dead air space between the top of the frames and the top lid. I should hate to be one of his bees, to be roasted alive.

Mr. C. winds up by saying he will give a full and complete written description of his hive; but all correspondents must send stamp and money enough to pay for stationery, &c. We suppose he means about *twenty-five cents* for DESCRIPTION. Cheap enough! Seventy-five per cent. below Gallup.

We have no "*axe*" to grind, but write simply to show that Mr. C. is mistaken in a good hive for Kentucky, Tennessee, and more Southern States.

With the best of feelings towards Mr. Condit and all other beekeepers, I am,

Very respectfully,

H. NESBIT.

Cynthiana, Ky., Dec. 10, 1871.

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VII.

MARCH, 1872.

No. 9.

Mitchell & Co. Reviewed.

EDITOR AMERICAN BEE JOURNAL:—Please insert the following extracts from Nos. 15 and 16, October 15th to November 1st, 1871, of N. C. Mitchell's bee paper,* that your readers may have both sides. L. L. LANGSTROTH.

"A Word to Our Subscribers.

"You will remember that we gave notice in the last number of the Journal, that we would publish in this number the claims and disclaims of Mr. Langstroth; and just as we go to press, we received from Rev. H. A. King of the *Beekeeper's* Journal, the statements of Baron von Berlepsch, who is an eminent beekeeper of Europe, and as it will look well in print, and being just the thing to read in connection with Langstroth's claims, we propose to publish it.

The reader will notice that Mr. Langstroth claimed everything; but finding that the com-

* I have been unwilling to call N. C. Mitchell's bee paper the "National Bee Journal," or Mr. King's "The Bee Journal and National Agriculturist," for reasons that I think will be deemed sufficient by all fair-minded men. In 1861, Mr. Samuel Wagner published the first periodical devoted to bee-culture ever issued in this country; its title was the "American Bee Journal." In consequence of the business disturbances created by our lamentable civil war, this publication was suspended one year from its first issue. In 1866, Rev. E. Vanslyke advertised that he would publish a monthly periodical, devoted to the interests of bee-culture, under the title of "American Bee Journal." On being informed by Mr. Wagner that this was the title of the periodical published by him in 1861, and the publication of which he intended soon to resume, and that therefore, while he conceded the right of any one to publish a periodical on bee-culture, he must object to his using this title. Mr. Vanslyke very honorably changed the name of his paper to that of "Bee Gazette." The editors of our prominent agricultural papers know that articles from the "American Bee Journal" have been credited to Mr. King and Mitchell's periodicals, and Mr. Wagner has been repeatedly informed that parties have subscribed for them, supposing they were subscribing for the "American Bee Journal." I do not hesitate, therefore, to stigmatize the conduct of Messrs. King and Mitchell in assuming titles so well calculated to deceive, as grossly unfair, and I believe that the public will sustain the charge.

missioner of patents would not allow the claims as presented, his attorney cunningly devised another plan. His motive is apparent enough, his efforts being given to mystify the claims in such a manner as to deceive the beekeepers in general, and determining to be obtuse as possible. He proceeds to draw up the disclaims of Mr. Langstroth, and in fact makes such a perfect job of it, that one must sift it thoroughly or he will not be able to see through both his claims and disclaims. To properly understand it, one must need be an attorney, and a pretty clear-headed one in the bargain, or he would never see his way through the fog of legal lore which envelopes the whole proceedings.

We were of the opinion that Mr. Langstroth had two claims that would hold good, neither of which would we give a fig for, and recent developments have confirmed us in the impression that should the case ever be tried in any court having jurisdiction in the United States, that said court will cancel the celebrated Langstroth patent; and we have serious doubts as to its ever being brought up for a test. Mr. Otis is the man *Friday* in Mr. Langstroth's life, and the very course of Mr. Langstroth's man *Friday* permits us in taking this view of the subject.

In the year 1863, this man Otis commenced suit against a number of men. We will mention the names of some: A. F. Moon, Vanslyke and Austin and others, all using different hives. This man *Friday* kept these cases before the court until even his stupidity comprehended that a compromise with the parties was out of the question, and accordingly withdrew them, and we are told that Otis paid the cost in every case.

But it seems at last, that Otis did get judgment against Charles Austin, and the decision of the court Mr. Otis had copied into Mr. Langstroth's *circular*, and paraded all over the United States, as a warning to all users and manufacturers of movable comb hives, and told them that their turn would come next. Nevertheless, movable comb hives flourished, improvements were made, and progression has kept steadily onward.

Now let us look into this case, and see what there is in it. There is only one judgment that the Langstroth party can show any one; and were we to assert that said judgment was obtained by default, you would say is it possible? and yet 'tis not only possible but true.

The suit was commenced in 1868 and closed in 1866. Time and again Mr. Austin appeared ready for trial, and yet it was deferred, and at last he determined to waste no more time, being aware that should they take judgment by default, he could at any time open the case.

So, in his absence the case came up; a judgment was found against him. That was just to their hand, and we are told they even paid the expenses incurred by the suit, not even calling upon Mr. Austin to settle one cent of it (very clever that). We don't see why they did not want the benefits derived from the judgment, and why they made no use of it save to herald it all over the country. We don't say it was a put up job, but it smells of it and tastes of it.

Otis is a cunning man, and he would be glad if Austin would permit him to take judgment; and as Otis has left Austin go scott free, what else does it look like? *Who will name the bunting?* Are we not right in charging that if Otis can prevent it, we will never have another decision upon the Langstroth patent! They dare not risk it. Their only desire is to scare somebody into paying them for what does not rightly belong to them.

If Mr. Langstroth's claims were to hold good, not one movable comb hive in twenty could be held as infringers upon the Langstroth patent; and as we have been compelled to come out in defence of the beekeepers, we must perforce make it lively for Mr. Langstroth's man Friday, and shall also give in our *future* numbers, the cuts and drawings of movable comb hives used *before* Mr. Langstroth obtained a patent, and that will enable all beekeepers to read Mr. Langstroth's claims understandingly. Both him and his man Friday have no one to blame but themselves in bringing this discussion before the public; if it is notoriety they seek, we propose to give them enough of it.

It will be remembered, that during the early spring months of this year, that Mr. Langstroth and his *right-bower* were swinging round the circle. Chicago was favored with their presence, where they sent out red hot shot broadcast through the medium of the *Prairie Farmer*, threatening direful things to all beekeepers using the movable comb hives. That article was copied (as was intended by them) into many of the agricultural journals of the United States—a *cheap way of advertising*—and at that time we put forth our mightiest effort to keep from opening our battery upon them; but after due reflection, concluded to wait further developments. From thence the pair proceeded to Wisconsin, and were there skinned to the tail by Kidder. Mr. Langstroth struck a *bee line* from there to more congenial climes, and his man Friday went at his old tricks, viz.: skinning everybody that he could find that was green enough to hold still. The instrument used for skinning was threats of bringing suits against said persons, and dwelling upon the enormous amount of costs they would be put to if suit was commenced against them.

Of course it took; for if there is anything our farmers dislike, it is a suit at law; and rather than have any trouble, they would shell out

beautifully. Others that would not come down with the needful, were told to look out for the United States marshal, and are still looking out for him, vainly, it must be confessed.

Many of them have written to us for our opinion, and have asked us to publish the Langstroth patent. For a long time we hesitated, Mr. L. being an old and honored beekeeper, and for whom we have ever entertained the best feelings; and in all candor, we must say that we dislike very much to say anything that will wound the feelings of Mr. Langstroth, having ever held him to be a good and worthy man; but human nature can't stand everything; and so long as he keeps that man Friday in the field, harping upon infringements, he must look out for breakers, for we shall defend the right and the people against fraud to the last.

Had Mr. Langstroth and his *right bower* been satisfied with their just claims, and kept about their business, they might this day have been in the same condition as the Yankee (*that got rich by minding his own business*).

We pity Mr. Langstroth for having selected such an instrument as Otis to represent him, and then persist in following him to the last ditch; and they will soon be floundering in the same ditch together, and no one will be to blame but yourselves. You dug the ditch, and the Good Book says: "they that dig a pit fall therein." Well; you will not be the first that have learned that fact when too late.

We also read in the Good Book of a certain Haman, that had a gallows prepared on which to hang a so-called infringer by the name of Mordecai, and *was himself hung thereon!* Mr. Otis, how do you like the picture?

In justice to Mr. Moon, let me here state that I have written this article without first consulting him, and he is not in the least responsible for it."

N. C. MITCHELL.

Personal.

"We are sorry to be compelled, in the present number, to depart from our usual course, in not allowing anything to enter our columns that could in any way be considered personal; and also that we have to attack so good a man as the subject of this personal, the Rev. L. L. Langstroth, patentee of the Langstroth bee hive.

Mr. Langstroth, let us say that we do not wish to injure you in the least, but we feel bound to say to you, as a friend that you must haul down that black standard of extermination; that cry of wholesale prosecution must stop; the beekeepers demand it; they claim the right to make improvements, and if need be, invent bee hives, and experiment in any way they may see proper.

As the case now stands, we must perforce take sides with either Mr. Langstroth or the people; one or the other must go to the wall.

There is, in our opinion, but one way left open for Mr. Langstroth, by which he can hope to escape honorably, and that way is, take the Langstroth hive as it now stands and is used throughout the United States by hundreds and thousands that are ready and willing to pay for them. No one has ever demanded of them any pay for the

right to manufacture and use them. If Mr. Langstroth will take his hive as it is, we would not have any objection to him getting a renewal of his patent. As it now stands, Mr. Langstroth has received scarcely anything for his invention, and is not likely to. As it now is, he may be considered unfortunate in having selected such a man as Otis to represent him. That man, Mr. Langstroth must get rid of, or his good name will suffer. We are of the mind that he has influenced Mr. Langstroth to make war upon beekeepers in general, and Mr. Langstroth is now called upon to decide between the beekeeping fraternity and Mr. Otis.

If he continues to back up Mr. Otis, and to endorse his procedures of enforcing war upon the so-called infringers, then we intend to enter the field, and will use every honorable means to force both Mr. Langstroth and Otis to the wall, and in doing so, we believe that we are acting in the defence of right and justice."

N. C. MITCHELL.

In publishing what he calls "the claims and disclaims of the Langstroth hive," Mr. Mitchell ought to have adhered strictly to the *original* instead of entirely suppressing the *Italics* in passages where those *Italics* were manifestly intended to direct the attention of the reader more particularly to the vital points. This manifest breach of good faith will prepare the reader for his subsequent misrepresentations.

"The reader will notice that Mr. Langstroth claimed everything." Those who read my careful disclaimer of the Huber, Munn, and Debeauvois hives, *republished by Mr. Mitchell himself*, will be at no loss to see that I did not claim everything. When Mr. M. asserts that "finding the commissioner of patents would not allow the claims as presented, his attorney cunningly devised another plan," he was either ignorant of the facts in the case, or he had referred to the files of the patent office to obtain the proper information. If he wrote these comments upon the way in which my re-issue was obtained, in utter ignorance of the facts, he must be a very reckless man; and if he wrote them after having informed himself of the facts, he must have strange notions of truth and honor. It is more charitable to presume that the habit of making wild and extravagant assertions* based only on a vivid imagination has "so grown by what it has fed on;" that he has actually lost the power of correct discrimination and sober statement.

Let me state some facts. 1st. I had no attorney, but managed my own case before the examiners whose duty it is, and not that of the commissioner, to pass upon applications for the re-issue of a patent. 2d. There was only a *single claim* objected to by the examiners, Professor

* See, for example, in his circulars and papers the repeated assertions that he could in a *single season* multiply his colonies *one hundred fold*, and that he had control of a patent for making artificial comb which would revolutionize beekeeping, when no patent had been issued for such an invention, and the plan though ingenious proved a failure.

Charles Page, now dead, and Addison M. Smith, Esq. Professor Page called my attention to the fact that he had seen—I think he said in his father's apiary—a shallow chamber over bars or slats nailed fast, so as to have no lateral motion, and that one of my claims was broad enough to cover this device. I give the claim as it stood in the original and the one in the re-issue, which I substituted for it.

CLAIM IN RE-ISSUE.

The shallow chamber in combination with the top bars of the laterally movable frames, or their equivalents, and with the perforated honey-boards upon which to place surplus honey receptacles, substantially as and for the purposes set forth.

ORIGINAL CLAIM.

The use of the shallow chamber or air space placed over any hive having bars or slats in combination with a perforated cover or honey-board on which to place surplus receptacles of any kind substantially in the manner and for the purposes set forth.

May 26, 1863.

Within the last few months, I have seen, in a French work published in 1842, the same kind of shallow chamber over the fixed bars or slats, mentioned by Professor Page. It is both figured and described, and if Mr. King thinks that it will help him advantageously to amend his answers to the suit of Mr. Otis, it will be cheerfully furnished to his counsel.

There are some grains of truth in the statements of Mr. Mitchell. My disclaims are *not* as clear to the general reader as they would have been if the patent office had allowed me to retain the whole of my original specification as it now appears on their files. In this specification I carefully described the features of the Huber, Munn, and Debeauvois hives, and showed in what respects they differ from my invention. It was objected to as unnecessarily minute, furnishing information highly interesting to inventors of bee hives, but which the office ought not to allow on account of the expense of copying it.

If Mr. Mitchell thinks that the court has only to pass upon the Langstroth patent to *cancel* it, why should he so bitterly complain of Mr. Otis, who is striving to give them an opportunity of deciding upon it? Why should he assault him with such vulgar abuse? Will not the public infer that if the bringing of Otis' suit against King to an issue would kill my patent, that both Mr. Mitchell and Mr. King would be glad to have the issue met.

In due time the beekeepers of the country will have ample proof who are the parties who are afraid to have the matter tested, and why they have sought by *indecent* accusations to forestall public opinion, so as to cripple Mr. Otis' pecuniary resources by putting it out of his power to collect money due him for territory sold. They have missed their aim; the money will not be lacking, and the suit will be pushed to trial. I pass over with a brief notice Mr. Mitchell's long account of suits. Unfortunately these suits were not *in equity*, the testimony was

taken by the defendants *ex parte*, without their being obliged to give Mr. Otis notice, so that he could be present and cross-examine their witnesses. Mr. Gifford, of New York, advised him to withdraw them for this reason. The judgment against Austin was for using the Kidder hive. It was obtained by default, because Mr. Kidder did not see fit to contest it. Mr. Austin used but *a single hive*. The object of the suit was to test the validity of the Langstroth patent, and show that the Kidder hive had infringed upon it, and Mr. Otis had no need to call upon Austin for any special damages.

When I personally informed Mr. King, about a year ago, that I regarded all his patents as infringing upon mine, he very pleasantly told me "that he would make a big fight," to which I replied, that we were glad to find at last a party who had so much at stake that he must defend himself, and test the validity of the patent to the satisfaction of the public.

Since that conversation, several propositions have been made by Mr. King to compromise the matter, in one of which he says that he has evidence, which if properly attended to, will, he is confident, invalidate my patent; but it will cost a large sum of money, and he is unwilling to engage in a controversy, and for the sake of peace would prefer paying this money to obtain a license under the Langstroth patent. For the sake of peace, he was willing to get a license under a patent which he could prove to be invalid, and thus join in calling upon beekeepers to pay for using what was public property! Surely, Mr. King's ideas of right and wrong need amending as much as his various patents, nearly every patented feature of which he has after trial discarded. (See April No. of American Bee Journal.)

Mr. Mitchell says: "If Mr. Langstroth's claims hold good, not one movable comb in twenty will be held as infringers upon the Langstroth patent." Now, we feel confident that the very reverse of this will be judicially pronounced true, and that not one movable frame hive in twenty will escape being enjoined as infringing upon the Langstroth patent. As to our great surprise, Mr. Mitchell has so handsomely endorsed us as a clear-headed attorney, he will surely review his opinion upon this matter, and thus make a proper use of our astuteness. We will charge him no fee for our "legal lore."

Let us look a little into that "threatening article" in the *Prairie Farmer*, from Mr. Otis and myself. I will first give the article:

"CAUTION TO BEEKEEPERS."

All persons using the Triangular Comb Guide, or "bevelled edge," in Langstroth hives, are cautioned against paying K. P. Kidder, or agents, for such use. *At our request*, he has sued us, and we believe the courts will soon decide that the said guide is public property, and that we are not infringing his rights in the Clark patent.

L. L. LANGSTROTH,
Oxford, Ohio.

R. C. OTIS,

Chicago, April 20, 1871. Kenosha, Wisconsin."

This was written after Mr. K. P. Kidder had served notice upon us that a suit would be brought against us for infringing upon his rights under the Clark patent on the triangular comb guide. Does the advertisement "threaten dreadful things to all beekeepers using the movable comb hives." It is true, that it was inserted as an advertisement in some of the leading agricultural journals of the United States, but the bills we paid for thus attempting to protect the public* would never have suggested to us the idea of *cheap* advertising.

We have little doubt that Mr. Mitchell did "at that time put forth his mightiest effort to keep from opening his batteries upon us." Neither Mr. King nor himself have ever made even a moderate effort to open their smallest batteries upon their friend *Kidder*. He is an enemy to the *Langstroth patent*, and must have every opportunity of levying unchecked his detestable black mail upon the *Langstroth* public. Messrs. King and Mitchell know well that he is defrauding the public, and that by their silence they are lending him aid and comfort.

Can those who have read Mr. Mitchell's abuse of "the old and honored beekeeper for whom he has ever entertained the best of feelings," can they, even by the largest stretch of charity, help believing that he enters upon his work with a hearty determination to strike hard and wound deep, and that his professed "tender mercies" are as "cruel" as he dared to make them?

Only a short year ago, he and Mr. King professed at the Cincinnati convention to be my warmest friends; and Mr. King, in particular, could hardly say enough in my praise, asserting that "He (Mr. Langstroth) first made high bee-culture possible by his genius and industry," and expressing his regret that his book contained some reflections upon Mr. Langstroth, which were published in misapprehension of the facts, &c. Had I sold myself to these men at that convention, and joined hands with them in maligning Mr. Otis because he asked the highest tribunal of justice in the land, the United States Court, to listen to his case, and decide whether or not the patent of which he owned the largest part was valid, and if valid; to speak with the strong voice of law to all infringers upon it, and give them to understand that there was such a thing as a legal patent on a bee hive, and that its owners had some rights which the courts would compel all parties to respect—had I then and there acted with such atrocious bad faith towards not only Mr. Otis, but towards every other party who have purchased a territorial interest in my patent, that the only way of explaining my conduct would have been the conviction that I had sold myself for filthy lucre, or had become weak and imbecile from disease; yes, had I there become the associate of Messrs. King and Mitchell, and like some others, their tool and dupe, I might have been allowed to pass my hat

* As we cannot do justice to Mr. Kidder in this article, we propose in a future number of the American Bee Journal, to give the Clark patent and Mr. Kidder's course as owner of it, a thorough examination.

around for a little charity to be doled out by the men who had enriched themselves by preying upon my invention.

Let not the honest and true men, who in all good faith purposed to raise a Langstroth testimonial, imagine that I mean in the least to reflect upon them, or that I shall ever forget their generous appreciation and cordial reception; and let those whose sinister motives, though veiled under the most plausible and hypocritical pretences, needed for their detection only the simplest sentiments of truth and honor, venture if they dare to unveil further the plots and intrigues of the Cincinnati convention of February, 1871.

Both Mr. King and Mr. Mitchell have repeatedly taken occasion to say that they "PITY" Mr. Langstroth. Beekeepers of America! I trust you will never see your old friend and servant fall so low as to become really an object of pity to such men as Messrs. King and Mitchell.

What have I ever done or said, as Mr. Mitchell intimates, inconsistent with progress and improvement in bee-culture? unless it be that kind of progress which has its beginning, middle and end in appropriating the work of other men's brains. If such easy virtue in the matter of dealing in patents is to carry the day, what need of learned judges to interpret our patent laws. A new highway will have been opened to the highest success. To travel safely on it, only patent some contemptible *gim-crack*; some frivolous if not noxious conceit; attach it to the valuable patent of a *bonâ fide* inventor; enrol yourself among the bands of humbugs and infringers; sign articles of agreement that on the principle of "honor among thieves," you will in no ways interfere with each other's piratical proceedings, but prey only upon the innocent public. Misrepresent, slander, and if needs be blackguard every man who has rights and dares to stand up in their defence, and if some men are to be credited, you are in a fair way to become one of the "great American apiarians," and world-renowned inventors, who stand in the very front ranks of progress and improvement. I will venture the prediction, that in due time the public will put their seal of honest condemnation upon all such preposterous pretensions.

"Raro antecedentem scelestum
Deseruit pede poena claudo."

Hor.

Justice outstripped, seems often halting in her pace,
Yet seldom is she beaten by a bad man in the race.

L. L. LANGSTROTH.

Washington, D. C., Feb. 16, 1871.

The *Mahonia aquifolium*, a species of barberry growing wild in Western North America, and introduced in European gardens as a beautiful flowering plant, is spoken of in German bee journals as a valuable, handy, early blooming honey plant. It is a bushy shrub, three or four feet high, said to blossom profusely in advance of peach, cherry and plum trees, and is frequented by bees in crowds. How is it in these respects in this country?

The Debeauvoys Hive.

The following communication comes to us alike unexpectedly and unsolicited, and yet comes quite opportunely. In the article concocted by H. A. King, which was given in the last number of the Journal, that veracious and fair-dealing dealer in worthless patents refers to the book of Mr. Debeauvoys and says the author therein "describes movable frames containing all the features of the most perfect frames now used in this country." If, before writing these words, King even saw and examined the Debeauvoys hive, or read a correct description of it and its frames, he must have known that he deliberately penned a gross misrepresentation, for the purpose of deceiving and misleading his readers. The Debeauvoys frames lack the essential features of the most perfect frames now used in this country, and for that very reason proved to be a failure in practice, so decided and irremediable that, after full trial they were rejected and abandoned. Perhaps, after reading Mr. Dadant's description of the hive and his account of its fate in France, King may begin to suspect that his efforts at deception have not been quite as successful, in this instance, as he hoped they would. He is doomed to yet other equally overwhelming and mortifying disappointments.

Honor to whom Honor is due.

In the patent hive contest which arose between Mr. Langstroth and Mr. H. King, I have no more wish to give my opinion than I have the desire of supporting either side. However, I think it is my duty to tell what the Debeauvoys hive was when the first two editions of Debeauvoys book were published. I had those two editions (1844-1847) in my possession, and manufactured hives with their directions, for my own use.

The frames of the Debeauvoys hive were as broad as the interior of the hive, i. e., close-fitting at the sides, and supported in the hive by two strips of wood nailed inside of the hive and at the distance of $\frac{1}{2}$ of an inch from the bottom.

The hive had its roof slanting and nailed. The bottom was movable. The two sides were movable doors, through which the frames could be taken out. These doors, being of the same size as the frames, could be pushed in the hive to contract the space. They were held in place with hooks. The frames were kept apart by nails driven in them at each side.

The hive worked well when new and empty; but after the bees had glued the frames, it was difficult to remove them, without breaking the combs.

It would have been entirely impossible to remove them at all, without separating the ends of the hive from the frames with a chisel.

This hive, which had gained 2,500 proselytes in France, was very soon abandoned by all; and the disciples of Debeauvoys returned to the old-fashioned straw hive. (*Vide L'Apiculteur*, Paris, Février 1869.)

The inventions of Debeauvoys were disastrous for French bee-culture. The tenacity with which the majority of French beekeepers hold fast to day to the old system, is due to the defects of the movable frame hives that they tried at first, "*Chien échaudé craint l'eau froide*."

The Berlepsch hive is not much better than the Debeauvoys hive, if we are to believe what M. M. Bastian and Monâ say of it.

Mr. Bastian writes in his book, "*Les Abeilles*," Paris, 1868, page 148, "The Berlepsch hive costs "from 15 to 20 francs; besides it has to be built of "very exact dimensions, for the slightest varying "prevents the frames from fitting in it."

* "A scalded dog dreads even cold water."

On the other hand, Mr. Mona writes in the Italian Bee Journal, "*L'Apicoltore* (Milan, July, 1871), "page 205, whatever have been the defects of my hive and methods, four years ago, I am not responsible, if they were not superior to the level of bee-culture in Europe. This vertical hive (Berlepsch "fashion) with 24 frames *arcipropolisabilli*, placed on top of the other, with diaphragms and small comb covers, with insufficient ventilation, and other "defects, was soon replaced by another system, that was altogether easier, cheaper, better, and more productive."

In the "*Journal des Fermes*," Paris, August 16th, 1869, page 324, Mr. Mona writes—"An American beekeeper, Mr. A. Grimm, visited me in September, 1867. He advised me to adopt the American form of hive (Langstroth's), which he himself used on a large scale. He asked for some boards, some nails, and a few tools, and after a short time he presented to me a pattern of his hive. I found the length of the frames disproportionate, but I soon recognized the advantage of the movable cover, and after a few weeks of hesitation, I resolved to make a hundred hives of the same kind, with shorter frames. I used them for the last two years, and I acknowledge that they are very useful for me, the handling of the frames being very speedy."

The reader will notice that the date of the construction of these hives is in accordance with the four years of which Mr. Mona speaks in *L'Apicoltore*.

It appears from the above that while the disciples of Debeauvoys in France abandoned his hive, and the disciples of Berlepsch and Berlepsch himself groped to improve their own hive, L. Langstroth gave to the American beekeepers an easily constructed and easily managed hive, which, from the beginning until now, rendered the best services to bee-culture.

I do not know whether these facts can have any influence on the law suit now pending, but I owed to Mr. L. Langstroth, I owed to truth, I owed to the history of bee-culture, the publication of the above facts.

I send one copy of this to each of three American bee journals. They will publish it, if they think proper.

CH. DADANT.

Hamilton, Ills., January, 1872.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—We really believe we have got at something. Just listen! It may not be new to some of our bee friends, but it is new to us. You remember how we fed our bees in October last, on coffee-sugar syrup, and sold our honey for twenty cents per pound.

Perhaps we did not tell you, but it is a fact, that three-fourths or more of twenty-five pounds we made them weigh was the sugar syrup, and we decided to risk the experiment, being sure that all other conditions were complied with.

Well, to-day (Feb. 12th) being very bright and warm, we put out one stock, just to hear bees buzz once more, and to see them fly.

Our "better-half" had just finished hanging out her morning's washing, when we announced our determination, and the white linen (or cotton) was flapping largely in the breeze.

"Now, Novice! Please don't put the bees out to-day. My white clothes (they are white, Mr.

Editor, if we do say it), will be all spoiled with their nasty work, and I shall have to wash them all over again."

We argued that we would only set out a few hives at the further side of the apiary.

"But they will fly all over, you know they will, as they always spot the snow for acres around; and you will get your coat spoiled too."

"We will take it off," we suggested, suiting the action to the word.

"But your shirt will be worse yet."

We were near to the bee-house by this time, and (Mr. Editor she *isn't* difficult; she knew where the old coat hung, and so did we, but old coats are too much bother. (Ours are all old enough, we thought.) We would be careful. We are *always* careful, unless something interests us very much, and then we sometimes forget. No. 61 was on its summer stand in a trice, and out came the yellow pets just as tame and just as we used to handle them in October. Out they pour as we raise their quilt, and in our haste to see who should see the queen first, our white shirt sleeves (*Monday* morning, you know), were forgotten, until we made the pleasant discovery that there were no spots on the snow, nor anywhere else; and there isn't a spot yet, though they have flown freely. We have read in the Journal of some such occurrence, but have always had a little doubt about their first flight in the spring not showing some discolored spots on the clean snow; but now we have it verified sure.

They have wintered unusually well, and we really begin to think sugar-syrup *safe* for wintering, if for nothing more.

Still further. A neighbor just came in, who borrowed our "tea-kettles" after we had finished feeding, and fed sugar-syrup to a *part* of his bees that needed it—all wintered in the open air in a row. Before we had time to ask, he mentioned that those stocks fed had not discolored the snow at all; while the old box hives, heavy with honey, had stained the ground and their hives as well, badly.

If the "tea-kettles" were a patent-right article, what a testimonial in their favor this would be!

This forenoon a gentleman called to get our opinion as to the cause of his bees dying in a house made like ours, and brought one of the combs for us to examine. We at once pronounced it "that bee disease" of the spring of 1863; and on looking carefully, we found the honey thin, with occasional small bubbles, and a taste that was not just right. He said his bees had worked quite late in the fall, and in some of the boxes the honey had soured.

Now, is the cause of that "bee disease" not apparent? It certainly is to us, and before we lose again all but eleven out of thirty-eight colonies, we will give them clear comb and coffee-sugar syrup. If any one else has had a like experience, please give it to us in the Journal.

If bees will always winter safely on sugar syrup, why not remove *all* the honey in the fall, and feed them up with sugar and the tea-kettle feeders? (Twenty-five pounds in nine hours you

know.) Then we can really "cover the arithmetical patent-right formula" of doubling *surely* and *safely* every year for twenty years. Honey paying for labor and hives, so that Mr. Apiarian can then retire from active duties and live on his little independence.

If Mr. Quinby and Mr. Langstroth, both, would give us their experience on wintering on sugar alone (coffee or crushed sugar), we should be more obliged to them than we can tell.

Mr. Editor, our weight is now 137½ lbs., (usual weight for the past ten years 125 lbs.), and we suspect that our success in wintering on sugar (the *bees* we mean; *we* shall eat the honey), will add at least 10 lbs. more.

One thing more. We fear that we have not made ourselves clearly understood, judging from something that Mr. Gallup says in regard to answering letters; for nothing gives us greater pleasure than to answer letters like the following (names omitted):

"Wis., Jan. 27, 1872.

"Dear Sir.—While in Medina last summer, I was very much interested in your apiary. The thought suggested itself to me of raising bees also, and I have now made arrangements by which I can have as many bees as cash and time will allow.

"If you would give me any advice as to beginning, and tell me what book or books to read, I would be much obliged.

"Yours, respectfully."

We believe we have never failed, in a single instance, to answer such inquiries as fully as we knew how. But when some one demands of us the results in detail of our experiments for the last five years, we cannot help referring him to the back numbers of the American Bee Journal. And when we have done so, so briefly as to perhaps seem unfeeling or rude, we most sincerely beg pardon, and will try and not think that we would like to keep bees on "Robinson Crusoe's Island."

Then, old Bee Journal, good-bye until next month.

As ever,

NOVICE.

[For the American Bee Journal.]

On Wintering Bees.

BY REV. E. L. BRIGGS.

The best mode of carrying our bees through the winter is doubtless the most important question now being asked by the apiarian.

It is not the receptacle in which they are kept, so much as it is the condition of the colonies when they are put into winter quarters, which determines their prosperity to the greatest extent, according to my experiments. If frost or dampness has already accumulated among the combs, by severe cold weather, and they are in this condition when the hives are set in the cellar, of course this dampness will produce mouldy combs; and this in turn will produce dysentery among the bees and cause the combs to be polluted by their untimely discharges.

Bees should be put into their winter receptacles long before severe freezing weather occurs; and always when the combs are free from dampness. In the latitude of 40° to 42°, not later than from the 1st to the 15th of November. In such cases, if kept in a temperature of from 32° to 45° F., they will remain almost dormant for the next three months, and very often, for five months together. But just as soon, after they begin to manifest the least uneasiness, as it is safe for them, they should be set out upon their summer stands, and allowed to take a fly for a day or two; and then return to the cellar again, to remain until spring weather permits them to begin to gather pollen. I think from five to eight pounds of honey will carry a colony through from the 1st of November to the 1st of April, under such circumstances. But from this until the blossoming of white clover, they will consume, in rearing brood and from being constantly active, perhaps as much as, or more than they did during the five months of winter confinement.

It is very important that the bees should be set out to take their winter fly, in just the right kind of weather, or great loss will accrue from their being chilled and never regaining their hives again. I have seen the ground almost covered for rods around, when set out in cloudy or windy weather. It should be a clear sunshiny day; perfectly calm, if possible; and the thermometer up to at least 50°. Then each colony should be set upon the stand just where it is to be placed when put out again in April, or great loss will accrue from them returning to their old entrance and never finding their way home again. Several such days occur almost every winter about the middle of February. This is the time to set them out. But better not set them out at all, than to set them out on a cool, raw, windy day; for to reduce their numbers greatly now, is almost fatal to their next summer's prosperity.

After a day's joyous recreation, they will remain quiet in their winter repository, when returned, though breeding will go on in the hive a little more rapidly than in the former part of the winter.

I have in a former article, given the best mode of ventilating a cellar, which I have ever seen described. But even a poorly ventilated cellar will do, if these precautions are observed.

When the combs are perfectly dry, and before hard freezing weather has commenced, set your bees in a dry dark cellar. Leave the fly holes open as in summer; open a small hole or crevice, such as a half-inch bit would make, near the top of each hive, for upward ventilation; leave them as quiet as possible until the middle of February: set them out on a calm fair day, until they have taken their flurry. Then return them to the cellar as before; let them remain until bees begin to gather pollen; then return them to the stand they occupied before, and let them remain for the spring and summer.

Unless diseased from some outward cause, bees will suffer next to no loss under such treatment, and the combs will come out as bright as in the fall, and not more than half of the honey will be

consumed that would be, if left on their summer stands.

When the next number of the Journal comes to hand, it will be the time for setting out the bees.

Concerning my method of spring management, I shall speak in another paper.

E. L. BRIGGS.

Knoxville, Iowa.

[For the American Bee Journal.]

The Twin Hive as a Non-Swarmer.

Just before swarming time I remove three large colonies, combs, bees and all, into three of the twin hives, setting them on the same stands. I then fill up the other end of the hives with comb, removing some of the brood into the vacant part and placing that end of the hive in front. This brings the working force into the vacant end at once. Now by managing so as to have the apartment that the queen was in always supplied with empty comb, there was no disposition to swarm. Now, read attentively Mr. Beckford's article, and also the editor's note on page 30, of the August number of the American Bee Journal, in regard to abstracting brood to prevent swarming, and you have the idea exactly; only, instead of removing this brood to other hives or colonies, we keep it in its own colony. Consequently we have gained the desired end, and still have kept all our working force at home, thus keeping our stock always strong; and strong stocks are the ones to gather honey every time.

We went into this experiment on purpose to test the hive as a non-swarmer, and we selected stocks that were extra strong and extra prolific queens. And this experiment was tried in one of the greatest swarming seasons we ever saw, and it was a perfect success, as neither of the hives cast a swarm. As soon as we got the stock well to work, there was no trouble about removing brood from one apartment to the other, as the queen passed freely into every part of the hive, of her own accord. By supplying these hives with young queens, and attending to extracting of the honey, we think that swarming would be entirely prevented.

We differ from Mr. Beckford about the early swarms, for this reason: His surplus is probably gathered from white clover—that is, the main supply, while ours is gathered from basswood (which does not come in until July) and fall flowers. Consequently early swarms is what is wanted with us, as we can get them and the parent stock into good condition in time for the harvest.

We have digressed a trifle from our subject. We tried another of our twin hives as a non-swarmer, in this manner: We removed a strong stock, combs, brood and all, into it, and filled up the vacant end with brood from other hives. The queen was an extra prolific one, and kept all the combs occupied with brood. This did not give us room to work our extractor, as we wanted to, and the bees were so numerous that

they filled the inside of the hive and both porticos were clustered full, both night and day. (Here was where we wanted the extra twenty-six frames in the cap; but we did not have it fixed for them.) Still there was no disposition to swarm, so we inserted a comb containing a sealed and nearly mature queen-cell, and the following day out came the largest swarm we ever saw. We hived it in a two-story standard hive. (Two of our standard hives, one placed on top of the other, makes a two story hive.) Right here we will state that we have repeatedly brought out swarms by the above method of inserting queen cells. In order to succeed it must be done at a time when the hive is populous with bees and brood, and the bees must be gathering forage rapidly. Many beekeepers now wish to control the increase of swarms, therefore we give our method of doing it.

ELISHA GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

The Queen Bee wiser in her Instinct than Man in his Reason.

We may study out many inventions that look very plausible and reasonable to ourselves; but when we come to apply our reason to the instinct of the queen bee, we find she does not view things in the same light as we do. My opinion is, as well might we undertake to teach a goose and gander to pair successfully forty feet up in the air or on the wing, as to undertake to teach the queen and drone to pair anywhere else than in mid-air and on the wing. They know nothing about performing their nuptial vows floundering about on *terra firma* or in confinement, where they have not plenty of sea-room, or to poise themselves in their flight and come together as their instinct teaches.

My opinion is, the queen and drone are attracted to each other by the peculiar sound of their wings, as well as manner of flight. To illustrate a little, we will take a turkey's egg, hatch it under a common barn-yard fowl, and rear it without allowing it to see any other turkey until the time for it to pair with its mate. If a hen, we will procure a male turkey and place him near the hen, but with a partition between, so that she cannot see him when he struts. The hen will show plainly by her action that she understands the meaning of that strut, although she has never seen one of her species. Now let them together, and watch their manner of courtship. We find it to be the same as in all other birds according to their kind, their own peculiar way. Just so with the queen and drone. They, too, have their own way of courting, which is high up in the air, on the wing, where they will not come in contact with wire screening or other impediments at every turn they make; but where they can sing their love song, and poise and embrace each other, according to their own peculiar instinct.

A. BENNETT.

Bennington, Ohio.

[For the American Bee Journal.]

Introducing Queens.

If we had only one race of bees, and if one queen were just as good as another, it would still pay to raise queens to be used in making artificial swarms, as much precious time may be thereby saved to the bees, which would otherwise be lost in raising queens in the height of the honey harvest. But when we are aiming to raise only the best, and to make all the improvement we can, to raise and introduce queens is, to the beekeeper, a matter of very great importance. I do not propose to say anything concerning the best method of raising queens, as that has been fully discussed by many who have more experience than I have. But I wish to call the attention of the readers of the Journal to my method of introducing queens.

To introduce a queen safely, the following points should be attended to:

1. Before liberating the new queen, the bees should have time to become thoroughly aware that their former queen is gone, and that their only hope of an immediate successor is in accepting the imprisoned stranger.
2. There should be time for the new queen to acquire the scent of the hive.
3. The bees should have time to become familiar with her, and accustomed to her presence.
4. She should leave the cage when the hive is closed and the colony free from excitement.

This last item is of great importance. If the bees are excited and alarmed, and there is any lingering odor about the queen which would cause her to be recognized as a stranger, her life would be in peril.

Unless some means are employed to give the queen and the colony to which she is to be introduced, the same scent, I would not risk liberating a valuable queen in less than forty-eight hours. I have one end of my queen cage closed with a plug of wood, having a $\frac{3}{4}$ inch hole bored through it, the inner end of which is reamed out in the shape of a funnel, that the queen may the more readily find it. The hole is closed with a wooden peg. In cool weather, I prefer to put the cage down between two combs, and in the centre of the cluster. In warm weather it will do to lay it on the top of the frames, if they be not closed at top, and to cover it with a cloth or a piece of carpet. At the end of the second day, I remove the peg from the hole in the stopper, and stick over it, on the end of the stopper, a piece of paper, or of cotton cloth dipped in honey, leaving the cage in the same position it was before, and close the hive. In performing these latter operations, I disturb the bees as little as possible. The bees will soon remove the honeyed cover, and the queen will, after a time, find her way out and be gladly received.

I have introduced a great many queens in this way, and have never had the bees destroy one so introduced; and I do not believe that there is the slightest danger of queens being destroyed, if this plan is carefully carried out. I have fol-

lowed it in every month from April to December, and always with the same success.

Last September I introduced a queen on a plan upon which I propose to experiment further. I prepared some sweetened water strongly scented with peppermint, and taking some of it in my mouth, I lifted the combs up one by one, and blew the peppermint water upon them in a fine spray, so that the bees were thoroughly moistened and scented with it. Having completed this operation, and removed the old queen while doing it, I dipped the new queen into the peppermint water and put her on one of the combs. She was received without any demonstrations of hostility, and a week after I found her surrounded by her new subjects and filling up the available space in the hive with brood.

I do not advise any one to risk a valuable queen in this way. The one I so introduced was impure, and I did not care whether the bees should kill her or not.

M. MAHIN.

New Castle, Ind. Dec. 6, 1871.

[For the American Bee Journal.]

Introducing Queens.

MR. EDITOR:—In almost every number of the Bee Journal I see the question raised and answered how queens are best introduced?

My experience is nothing new at all, often described by others, and once already by myself. The method is so simple and effective, and just this simplicity may be the reason why our bee-keeping brethren don't more generally use it.

I grate two good sized nutmegs, mix them up with diluted honey or sugar syrup (or sugar water) in a tumbler holding one-fourth or one-third of a pint, and set it handy. Then I go to the nucleus, cage the queen I want to introduce, and stick her with cage in my vest pocket. Now I proceed to the hive whose queen I intend to supersede, kill her, or dispose of her to suit myself. I next with a teaspoon pour from the tumbler above described enough syrup between every two frames, so as to wet slightly almost every bee in the hive. I leave enough in the tumbler to give the queen a dive in, take her out with the teaspoon, drop her between the frames, and shut the hive.

I have hardly ever made a miss, with this way of introducing. It is in summer often a loss to have a hive queenless for only two days, but with the above described process the bees apparently do not become aware that a change is made.

In the fall I should prefer introducing queens with the cage, as the absence of a queen for a few days at this season does not make so much difference to the hive, and forage being scarce other bees are easily induced to rob. Yet I have introduced queens with nutmeg successfully in the fall, shutting up the entrance with wire gauze for a few days if necessary to keep out robbers.

Last fall I introduced two queens with the nutmeg process, in the presence of brother Hulman, of Terre Haute, Indiana, when he remarked

that if he treated his bees in as reckless a manner as I did mine he should ruin his whole apiary. I wish that Mr. Hulman could have given me a call a few days later, when I could have shown him how my two queens were received.

I have often kept queens caged, together with a few workers, on the top of brood frames, until I could make the proper use of them, the queens would keep alive in some instances for weeks, while the workers generally soon died. But last fall I had a valuable queen killed in the cage on the second day, her legs being bitten off, &c. Brother Hulman suggested that the presence of the strange workers in the cage irritated the bees in the hive and caused them to attack the queen. This is reasonable, and since I cage queens alone when introducing, or when I put them for safe-keeping on brood frames.

C. F. MUTH.

Cincinnati, Jan. 15, 1872.

[For the American Bee Journal.]

An Item on Upward Ventilation.

AN EXPERIMENT IN WINTERING.

About the 20th of November we had a few days of unusually cold weather for the time of year in this latitude. It happened that some two weeks before I had equalized the honey by changing frames in several of my stocks, and had inadvertently left all the holes in the frames open in those hives. In my other hives they had all been closed with small blocks when the honey boxes were removed. On the 1st of December I put my bees in winter quarters. I was surprised to find fewer dead bees in every hive that was thus left with a free upward ventilation than in those that were closed. Noticed also that these hives were perfectly dry on the inside, while in the others, in almost every instance, ridges of ice were plainly to be seen leading from the entrance, showing that condensation had taken place within the hive, and the water had run down the sides and out of the hives.

I have on trial an experiment in wintering. It may not be new to many of your readers. I placed my hives in a double row about twelve inches apart each way, on boards covered three or four inches deep with common prairie hay. I then drove posts in the ground, to which common fence boards were tacked, so as to form a large box entirely surrounding the hives, fixed a six inch board about seven inches above the entrances, in such a way as to prevent the hay from closing the entrances to the hives, then crowded the hay all around and on top of the hives. I left half of the slats open in the frames and filled the caps with hay. Of course the result is about the same as if all my hives were buried in a hay stack with the entrances left open.

I fear that trouble may arise whenever the weather is warm enough to cause the bees to fly, from the fact that many will enter the wrong hives and thus be destroyed. As the double row extends north and south, of course the sun will

shine on each row of hives but half the day, and as the rays strike upon but a few inches of each hive, I think there will be but a few days during the winter when the bees will be warmed up enough to cause them to fly.

I have tried to winter a few stocks on their summer stands. Will give you the results of my experiments in the spring.

E. A. GASTMAN.

Decatur, Ill., Jan. 6, 1872.

[For the American Bee Journal.]

On Supplying New Swarms with Ready Made Combs.

Some beekeepers assert that supplying ready made combs to new swarms is a great advantage, while others allege that it is an actual damage. Both parties are right. Allow me to explain. If we have a swarm come out at any time when bees are gathering very little honey, and we supply them with ready made comb, the queen can at once go to depositing eggs as rapidly as she chooses, provided the bees gather just sufficient honey to keep her breeding actively, without storing any in the cells to be in her way. Now we know positively that under such circumstances ready made comb is a great advantage. On the other hand, if we have a swarm come out while the basswood is in bloom, or at any time when the bees are gathering honey rapidly, and we supply them with ready made comb they will fill it so quickly that no room is left for the queen to deposit eggs. The consequence is that the swarm, unless attended to and relieved by means of the extractor is actually ruined, for we have a hive completely filled with honey and no bees in the fall. But if we allow them to build their combs they consume so much honey in the elaboration of wax and manufacturing the combs that it gives the queen a chance to deposit eggs, and the swarm turns out to be a good one. Give us the combs ready made, and we will use it under all circumstances, and with our management and the use of the extractor call it an advantage. In fact we can see no chance for argument on this question when properly understood.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Product of a Swarm.

MR. EDITOR:—The honey season is over and our bees are put up in winter quarters. The past season has been what we here call a very fair one. I wintered seventeen colonies last winter, and increased them to thirty. More than one half of my swarms were natural ones. I aimed to keep my colonies strong, with the hives full of bees; but about the time I got them as wanted, they would swarm. The Italians are given to such tricks. Early in the honey season I selected a strong stock of Italians,

to see what I could realize from them. On the 12th of May they cast a large swarm. I put it in a two-story Thomas hive, with nine frames above and below; the lower frames ten inches deep, the upper ones eight inches deep. At the time I hived the swarm, I filled about one-half of the frames with empty combs, putting worker combs in the lower frames, and drone combs mostly in the upper set of frames.

From this swarm I took with the Extractor, two hundred and sixty-one and a half (261½) pounds of nice honey. The old stock was used for box honey. From it I took eighty-five (85) pounds. I did not extract any from this stock, but think I could have taken forty or fifty pounds of extracted honey, and the same amount (eighty-five pounds) stored in boxes.

The eighty-five pounds of box honey taken from the old stock, sold for fifteen cents per pound—making \$12.75. The two hundred and sixty-one and a half pounds taken from the swarm sold at ten cents per pound, making \$26.15. The two amounts together make \$38.90, the swarm was worth \$15.00—which, added to the foregoing, makes \$53.90; from which deduct the cost of the hive \$4.00, and it leaves \$49.90, as the net profit of one stock. I know this does not compare very favorably with Novice's three hundred and thirty (330) pounds, but I am only a young novice, while he is an old one. And you, Mr. Editor, can tell Novice that I am going to make a larger hive next year, and go for him again.

There are a great many bees in this county, and honey is very cheap here. I got from thirty colonies one thousand pounds of extracted honey, and six hundred and fifty pounds of box honey the past season.

J. P. FORTUNE.

Bloomfield, Iowa, Dec. 11, 1871.

[For the American Bee Journal.]

Novel Bee Dress.

MR. EDITOR:—On our way to town, last spring, our attention and that of the old mare we were riding was attracted by a strange, grotesque figure moving about on the road, whose manœuvres were occasionally very quick and then again quite slow. As we approached it had somewhat the appearance of the Ku Klux of Robinson's circus, minus the head. Approaching nearer we saw a pair of legs in boots beneath, when any fears we might have entertained disappeared, and we learned what was going on.

A man by the name of Parrish, a near neighbor of Old Reuben Birch, had a swarm of bees come off and pitch upon the back of a worm rail fence. Having ineffectually tried to hive them, in doing which the enraged bees had left from ten to a dozen stings with different members of the family, he sent for old Reuben, who never failed, as he always did things according to rules laid down in the Tar river code; and it was he we saw in the road.

Well, Reuben was ensconced in the old woman's *Bal-moral*. The drawstring, instead of

being about the waist, was tightened just above the brim and around the crown of an old high top beaver. The forepart of the garment was behind; and the hind part, having a slit down it several inches, was before. The slit being near the face served as a kind of window for Reuben to peep out at. He was also armed with a long-handled broom; and the gum was placed on a coverlet on the ground, beneath the cluster.

Old Reuben would open a little crack of his stockade, to ascertain the exact locality of the bees, then close up, and with the broom, sweep, sweep, he would take the cluster, and a cloud of bees would in an instant be on the wing. They went for that *Bal-moral*, but down old Reuben would squat and remain motionless until things became a little settled, then peep out again to note progress. More of them settling again on the fence than went into the gum, sweep, sweep, he would again bring them down; and we had to move the old mare several rods further off as the bees were briskly circling, in search of something they *could* get at.

The king having gone in after the lapse of about fifteen minutes *hiving*, the workers soon followed, and old Reuben, in triumph, walked to where we were standing, and as he came out from under that *Bal-moral*, the sweat was standing about in pools upon his face. We have often thought since, that we never saw a man sweat in earnest before; and feel sure that twenty minutes, on that day, under that *Bulmoral*, was equal to the same length of time in Nero's cave at Naples. H.

Murfreesboro, Tenn., Nov. 20, 1871.

[For the American Bee Journal.]

National Society of Beekeepers.

MR. EDITOR:—I agree with you that, in the absence of jealous care, there is great danger of a national society of beekeepers being so conducted as to subserve the selfish purposes only of a few individuals, whose sole object in being present at such gatherings, is that of advancing their own personal and pecuniary interests. One of the first manifestations of such a tendency, is that of some individual writing and publishing a nicely colored report of all he puts on exhibition, or of what he, or such persons as he uses for mouthpieces, say upon all subjects—a polished report which tends towards building up a prosperous business for himself. At the same time care is taken to fail to report what is either exhibited or said by others, who are not their special instruments of profit;—no matter if what these have said or done be ever so much calculated to promote the general interests of beekeeping throughout the country, far above and beyond anything that such designing persons may have said or done, either themselves or through their satellites.

This matter I thought of when the first move was made towards the organization of such a body, but never resorted to any special means of preventing such a tendency, until the North American Beekeepers' Society was organized at

Cleveland, in December 1871, at which I was a member of the Committee appointed to frame a Constitution for the general government of the society. It was, I think, agreed by all the members of the committee, that the treasury of the society should be kept sufficiently flush with means to enable its members to publish an impartial and complete report of all the proceedings and discussions. In the absence of such a report, it was thought that a national society could not do much towards promoting the general beekeeping interests of the country, and would also fall short even in benefiting its own members to the extent it could if the proceedings were printed in pamphlet form for future reference.

With this object in view, special provision for the accumulation of a treasury fund was made in article 5th, wherein it was stated that each member of the society should pay one dollar at the time of becoming a member, and one dollar annually thereafter, into the treasury. But on presenting the constitution to the society for final adoption, objections were urged against the annual payment of one dollar, and this special provision was stricken out.

Through this amendment I fear that one of the principal supports of the society has been withheld, as it seems quite clear to my mind that in the absence of funds for the special purpose of publishing our proceedings, they will remain unpublished, or be liable to be garbled just to suit designing parties, who may be connected with the organization. Thus the object contemplated, of publishing a valuable pamphlet each year, has been completely thwarted. For there can be but little benefit accruing to the beekeeping fraternity at large, out of the annual meetings of such a society, except through the medium of placing before the masses a true report of their discussions, and of the experience of many beekeepers who may, at such meetings, give a full statement of their different methods of managing bees. If its beneficial results are not to be found in this, then such an organization is not calculated to benefit any but that class of persons who have something to sell to beekeepers; and they, or a portion of them, will not fail to have everything reported in full that is calculated to put an additional feather in their caps.

These matters, as I have stated, were thought of by the committee on permanent organization; and after the means for printing our proceedings in full, were discarded, I took it upon myself to offer a resolution (which was adopted) to the effect that the proceedings of the Indianapolis, of the Cincinnati, and of the Cleveland conventions, be published in pamphlet form. It, of course, remains yet to be seen how full and impartial the report will be. Should it be of such a character as to point out selfishness on every page—such as placing certain persons and their merchandise prominently before the beekeeping public, to the exclusion of others of equal or perhaps much more merit; or placing remarks of some persons prominent before the public, not because they have done or said as much for the benefit of bee-culture as others,

but because they are instruments of profit and gain to certain parties; then I shall insist upon either a disbanding of the society, or making provision in our constitution for the publication of full and impartial reports. Should this matter be neglected, the grand object for which such a society should exist will be completely submerged.

Let me say to the Editor, that the JOURNAL is improving with each issue. Long may it live and its subscribers be increased tens of thousands annually.

G. BOHRER.

Alexandria, Ind.

[For the American Bee Journal.]

Super and Nucleus Hives.

DEAR JOURNAL:—On page 154, of the Journal for January, Mr. A. Grimm, gives his methods of managing the "super hive" from which to extract honey. As I have met with the same unsatisfactory results as those which Mr. G. speaks of, in the usual mode of management, I adopted a plan entirely different from those given by him; and where an increase of stock is desired, or new combs are needed (which is often the case), I believe my plan is preferable. It is this: If available, procure a frame of straight comb, or failing in this, lift out an outside frame from the brood chamber, placing it with an empty frame on each side, on one side of the super, adjust the division board, and cover the balance of the brood chamber with a honey-board. The honey-board should be composed of two separate pieces (two widths of weatherboarding answers well), so that when it is necessary to furnish additional frames, the edge of the first may be raised over the second, and slid any required distance.

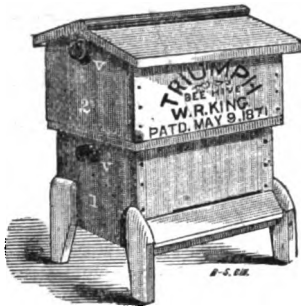
This plan for many reasons, is much better than the one usually followed, namely, that of opening up the whole super at once; as the small amount of surplus room thus given to begin with, does not tend to produce a discouraging effect on the bees, yet there is room sufficient for the effective force of wax workers to be brought into requisition. Besides, as is well known, by alternating empty with full ones, each comb is built in the frame, without being run over and attached to another, as so often happens when two empty frames are placed in the hive, side by side.

We have put up a nucleus hive *a la mode* Gallup, with not only an entrance at each side, but with a nice little portico at each entrance—painting each a different color. Would it not be an additional feature to make the division of wire cloth, as it would certainly add much to the mutual warmth? We have used such partitions when wintering two small colonies in one hive, with success. Let us have your opinion Mr. Gallup, as we "take stock" on your suggestions, having found but few of them that would not bear a practical test.

RUSTICUS.

Jan., 1873.

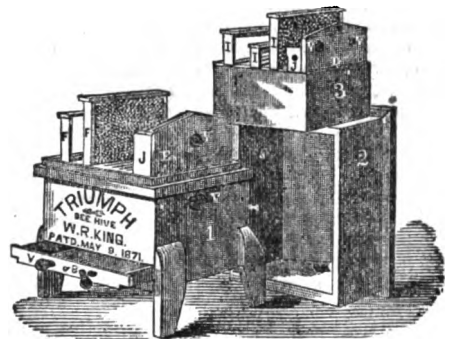
[For the American Bee Journal.]

"Triumph" Bee Hive Description.

MR. EDITOR, and brother beekeepers:—According to promise, I give you a description of the Triumph hive, with cuts to illustrate it. The above cut represents a front view of the hive, which is 24 inches long, outside measurement, by 16 inches wide and 10 inches deep. The frames are hung either upon the rabbeted edges of the brood chamber, or upon strips $\frac{3}{4}$ of an inch square tacked on the inner edge of the brood chamber $\frac{3}{4}$ of an inch from the top. The frames are hung the narrow way of the hive, instead of lengthwise, as in the Langstroth. The advantage is that in handling new combs filled with brood and honey, there is but little danger of the combs falling out of the frames, as is frequently the case with longer frames. We use from ten to fourteen of these frames, as circumstances require. We have a partition board in either one or both ends of the hive, that fits closely in the chamber, yet is perfectly easy to slide either back or forth, for the purpose of contracting or enlarging at will, the brood chamber. The frames are made of strips $\frac{3}{4}$ of an inch thick. The top piece is $1\frac{1}{2}$ inches wide. We cut three-thirty-seconds of an inch off both edges of this top piece, commencing $1\frac{1}{4}$ inches from each end. This is to let the bees pass into the surplus chamber above. The end pieces are $1\frac{1}{4}$ inches wide, and $9\frac{1}{2}$ inches long. The bottom piece is $\frac{1}{2}$ inch wide. The end pieces of the frame have a little cleat or block $\frac{1}{2}$ inch square and 1 inch long tacked on their bottom edges on both sides. This prevents the frames from touching each other, excepting at these points and at either end at the top. The frames are thus made to fit up close against each other at the points named, yet leaving space for bees to pass above, between, and all around them. We now slide our partition board up against them from either end, placing wedges behind it. The brood chamber is thus formed, and by so arranging it, we secure the frames in such a manner as to be able to ship the hive filled with bees and comb to any part of the United States or Canada, without any danger of the combs being broken down. In November, last, I shipped 48 colonies from Milton, Ky., to this place (over two hundred miles), by boat fifty miles, and by rail-

road one hundred and fifty, and they were hauled one mile in wagons, and not one comb was broken down; besides there were not more than one-fourth of a pint of dead bees in all the hives put together. I simply pressed my wedges in tight, putting a nail in each of them to keep them in place. There were no frames to be nailed down. One dozen "Triumph" hives can be prepared for shipping in the same time you would be preparing one of any other kind, differently arranged.

We use the hive both with and without a wire bottom. The wire used is No. 8, and is tacked to the sides and ends of the hive $\frac{3}{4}$ of an inch from the bottom of the frames, covering the whole bottom. Underneath the wire bottom we have a drawer or receiver, to receive all the chippings of comb and filth thrown down by the bees. This drawer has strips of tin, $1\frac{1}{4}$ inches wide, tacked on to its edges all around, extending over the inside. *This is our moth trap.* Of course there are many worms that pass into this drawer, and unless it is cleansed at least once in ten days, they will accumulate until they fill the drawer to the wire above with web, and then they can return to the brood chamber. I would advise any one who will not look after his bees to use the hive without the wire bottom and drawer; but those that will cleanse it, will find that it is of great advantage, as by means of it we keep the bottom of our hive perfectly clean, without interfering with the bees. We also more successfully ventilate the hive, as will be seen by examining the following cut.

SECTIONAL VIEW.

This cut shows a sectional view of the hive with fig. 2, the cap, off. Figure 3, represents the surplus honey chamber resting on the top of the cap, with three of the surplus frames pulled up in it. This chamber has a partition board with wedges. The frames in it are only $6\frac{1}{4}$ inches deep, but are of the same length as those in the brood chamber, and can be used in the brood chamber for feeding purposes. These surplus frames fit closely in the chamber, being suspended on the top edge. We use no honey-board, so-called, *except in winter.*

The patented features in this hive are the *ventilators* and the *perforated division boards*, which are used in a large hive not represented in these cuts, but which I will explain hereafter. The

claims as granted read thus: *First, the air spaces, W, W, and ventilators, Z, Z, arranged in either end of the hive, with air space W, and ventilator Z of the upper chamber substantially as herein set forth. Second, the perforated division boards H, H, arranged on either side of the centre of the chamber A (brood chamber) cut-off, I arranged to operate as and for the purposes set forth.* In the first claim the objects set forth are that we may effectually control the ventilation of the hive, and at the same time we prevent others from securing frames in the hives in like manner. The air spaces W, W, spoken of, are the space between the partition boards and the ends of the hive, both in the brood chamber and surplus honey chamber. The perforated division boards are used in a hive 40 inches long, outside measure, and exactly of the same depth and width as the one above described. This hive has three entrances, one in the centre, and one six inches from either end. We form our brood chamber in the centre of the hive by putting in 14 brood frames.

For further particulars, address

Franklin, Ky.

W. R. KING.

[For the American Bee Journal.]

Natural, Hardy, Prolific Queens.

MY LAST BLOW.

No doubt it was in order to puff his *reversible, removable, double cased, sectional casket, movable comb hive*, that Mr. J. M. Price, after worrying his brain, found no other way to attract attention than to give a writ of imbecility to all the beekeepers who make artificial swarms or raise artificial queens; claiming that they act against *reason; nature and common sense.*

That theory, respecting natural, prolific and hardy queens, inflated with hyperboles and misstatements, had no more power of resistance than the red inflated balloons of our children. Verity, with one touch of a pin, caused it to collapse completely. Mr. Price, in the American Bee Journal for November, tries to inflate it anew by similar means, adding calumny thereto.

I beg the reader to remember that in the number of the A. B. J. for January, 1871, page 163, Mr. Price says that he has tested his method for *five years*. In the number for November, nearly a year later, he says he has tested it for *two years*. He erred in the first case, or he erred in the second.

In the A. B. J. for September, 1868, and in that for January, 1869, Mr. P. says this experience is to make *ten swarms from one*, and that *every swarm raised its own queen*. In the same Journal for November, 1871, he says that he *never* raised artificial queens in small swarms, but used only his largest and most vigorous stocks. What is that, if not a second error?

Mr. Price cites Gallup as sustaining the same views as himself. Yet I have already pointed out the ideas of Mr. Gallup, such as I find them

in an article published by him in October, 1870. He says—"A queen cell built over an egg and fed as a queen from the start, I have not been able to discover why they are not as good as natural queens raised at swarming time." What shall I call such voluntary mistakes of Mr. Price?

Further on Mr. P. asserts that Novice bought twenty-five queens from Mr. Adam Grimm, to replace his queens, because they were too old, after seventeen months. Yet nowhere did Novice say that his queens were too old; but that he replaced hybrid queens. See A. B. J. for November, 1870, page 100. Is not that a fourth error?

I could make more similar quotations, but these are sufficient to show the truthfulness of Mr. Price.

As to the tested queen that Mr. P. did get from me in the beginning of June for six dollars, she was, before leaving Hamilton, one of the most prolific in my apiary. What experiments did he make with her, when she came into his hands? The reader can read partial accounts of these in the A. B. J. for January, 1871. In that number Mr. P. shows that that queen was the first Italian he had ever seen, and that she was also the first he had ever introduced in all his life. He was then so little acquainted with introducing queens that, after he received her, he looked over the back numbers of the A. B. J., to find the way to introduce her. He states that he put her on a comb of sealed brood, without bees, except those that accompanied her, and placed the hive near his stove. Then, after dark he looked her over and concluded to shake the bees off seven stands at the entrance of her hive; and that the second day after, he changed his mind and placed her, caged, in another hive which had the swarming impulse. And he dwells for more than a column on his unskilful precautions, showing his inexperience in the matter.

So, that unhappy queen, wearied by her journey, had to endure being handled and carried from one hive to another, and bear all the bungleings of Mr. Price, together with ill treatment from the bees of seven hives, more or less ill disposed towards her. And, finally, she had to suffer the pinchings of bees under the swarming impulse—which forced her to lead out a swarm 9½ days after her introduction, and *nearly four days before the first queen cell was capped over!*

Is there any queen breeder who would guarantee the prolificness of his queens, knowing them to be in such blundering hands as those of Mr. Price?

So little did I promise to replace her, and so little did Mr. Price believe that I made such a promise, that, when asking from me another queen, he added—"If you can, let me know, *with price.*" With this, I enclose to the editor two letters of Mr. P. Indeed, I wrote to Mr. P. that probably the queen would be better in spring. Knowing the dealings of the man, I did hope that before spring, the queen, recovering from maltreatment, would have reinforced her hive, so as to be in better condition.

But was the queen as unprolific as Mr. P.

asserts? Is she dead, as he alleges? The repeated mistatements of that bee bungler give us the right of doubting these allegations.

I never refused to replace her; but I did refuse to sell a second queen to Mr. Price, for he had made too much unwarranted fuss about the first.

Mr. Price can, if he chooses, send my letter of refusal to the editor, whom I authorize to publish it, and to treat me as a falsifier if the facts are not as I represent them.

Proposing a theory before having sufficiently tested it, sustaining his ideas by false allegations, and then calumniating his opponent, are means ill calculated to entitle any one to a claim to be considered a true gentleman.

What think you of it, friend beekeepers?

CH. DADANT.

November 3d, 1871.

P. S.—As many beekeepers may not know what I mean by the "pinching of bees during the swarming fever," I wish to give my experience in explanation.

Two years ago, while experimenting with the Quinby queen yard to prevent swarming, the bees of one hive under experiment tried to swarm. The queen, which had her wings cut, could not follow and was kept a prisoner in the queen yard. While the bees were on the wing, I opened the hive and cut out every queen cell. A few days after the bees swarmed anew, and I saw them pinching and biting the poor queen, to force her to follow the swarm. I opened the hive again, and destroyed all the incipient queen cells. The bees swarmed a third time, and I had the greatest difficulty to rescue the queen, and the next night she was killed and cast out of the hive.

During all that swarming fever, the queen, worried by the bees, had deposited very few eggs; and the bees remained idle in the hive. I did not get an ounce of surplus honey from that stock.

I do not present this experiment to help my cause. The editor can read an account of it in the French "Journal des Fermes" for July, 1870, page 307, where I related it.

Similar pinchings were, without doubt, brought to bear against my queen; for she was introduced in a hive during the swarming impulse. In one of the letters which I send to the Editor, Mr. Price says that she was put in a colony he was experimenting with raising queen cells. I beg the reader to remark how discordant that word "experimenting," is with his method tested "five years."

Another proof that my queen endured the pinchings of the bees, is, that she led out a swarm four days before any queen cells were capped over. And Mr. Price wonders at the occurrence!

After having swarmed, my queen was not protected against the hardships inflicted on her by her new possessor. He writes, in one of the letters I send to the Editor, that every morning and every evening, for weeks, he removed every comb containing brood or eggs, and replaced them with frames of empty comb—even remov-

ing such as she had commenced to lay in. He adds—"At no time did she lay during any twelve hours more than a two or three inch circle could cover. A circle of two or three inches, in diameter, gives nearly three hundred eggs for twelve hours, or six hundred in twenty-four hours, or nine thousand bees in fifteen days. This was in the last fortnight of July, a time of the greatest drought.

A man who wishes to kill his dog gives him a bad name; but the laying of the queen was somewhat better than represented by Mr. P., who had every interest to find my queen less prolific than his; for she was an artificial queen, and he had already proclaimed his theory.

Besides, in the American Bee Journal for January, 1871, Mr. P. says that—"About the first of September she commenced to do a little better." We thus find that that poor queen, so much traduced in words and abused in acts, was not, to sum up all, near so bad as she was proclaimed to be.

I have seen queens, very prolific in April and May, deposit fewer eggs in July, August, and September, than the queen in question. I guess the Editor would be a competent judge in that matter, and likely to think that changing combs every twelve hours, would interfere with the laying while the queen was reconnoitering the newly introduced combs.

I have one remark more to add, and I am done. In his letter, Mr. J. M. Price says that he obtained seven queens "all good" and prolific, and in the American Bee Journal he says, that one of the seven was "wingless." Which of these is the true statement?

In all my discussions with Mr. Price, I wrote with proofs in hand. If he does not show his proofs against me, I will hold him a calumniator.

C. D.

[For the American Bee Journal.]

A Little Plain Talk.

MR. EDITOR:—Do let me hit Novice just a little, for I want to know what effect it will have. On page 27 of the August number he says: "*Many are working and thinking of a hive with the proper number of frames spread out horizontally, so that no upper story will be in the way,*" and then he mentions me as of that number. When I got up my hive, I sent a description of it to some twenty individuals, whom I knew were using my style of frame, and requested them to try it; and among the rest I sent a very private description to Novice. Well, I received a very short reply, stating that he did not think it would work, the arrangement was too cold, &c., &c. We were perfectly satisfied then, that he had not paid attention enough to our description to understand it; and on reading his arrangement of his eight American hive (which he calls more compact than Gallup's) we felt very much as though we ought to have sent a description of our hive by telegraph to the North Pole (suppose they have a telegraph attached to

that pole by this time), so that we could have received the opinion of an Esquimaux or a Kamshatcan, along with Novice's opinion of our hive. Why, Mr. Editor, only think of his comparing our hive to an American hive, and deciding that the latter, as arranged by him, was much the best! We were just as mad as our skin could hold. But to return to our story. His remarks have called out quite a large private correspondence, and it is for the purpose of making some explanations to said correspondents that I commence this article.

The reader will understand that Novice set his two sets of frames in this manner—one set by the side of the other; while we set one set of frames directly in the rear of the other—quite a different arrangement in our estimation. Now any one using the Kidder, Thomas, or almost any square frame can try the experiment with one or two hives; and we are not sure but even the American will work with our arrangement. Make your outer case long enough to hold two sets of frames, one set directly in the rear of the other, and have an entrance in the front and rear ends, just alike. Have the passages through the centre board, between the two sets of frames, clear across the centre and also at the bottom of said centre board. Now, by closing these passages, either end is in the same fix as a single hive, so far as a swarm of bees is concerned; and in fact, if we keep those passages closed, we can work two swarms of bees in this double hive. So we certainly need not throw it away, but keep it as a curiosity, if for nothing more; still, we believe it will work for one swarm satisfactorily. Now as soon as this swarm is populous enough, and the weather is right for storing and extracting, fill up the rear end with worker comb, remove two or three cards containing unsealed brood into the rear end, replacing in the front end empty worker comb. Now, revolve this hive half around, bringing the rear entrance to the front. (Of course the rear entrance has been kept closed up to this time.) Now what was the front has become the rear. Nearly close this end and open the other, and you bring the whole working force into the vacant end at once, instead of waiting for them to take possession of an upper story (as we sometimes have to do). We have, as the little girl says, *foolished* them; and they are not even aware of it, as both ends are exactly alike. Thus we have the novelty of a swarm of bees departing from one end and arriving loaded at the other. Before admitting the bees to both ends, or at that time, we open the centre passages. Now keep the brood about equally divided, part in one end and part in the other, and in the centre of each apartment, with the empty combs at the sides of the hive. If a novice does not know how to get up a good strong stock of bees in the double hive, let him proceed in this manner: Take brood nearly ready to hatch from other stocks, and fill up the vacant end, time enough before the honey harvest commences, to have them on hand to help to store honey. A large colony, in any hive for storing, should have a good, young and prolific queen. It is useless to work a small, weak swarm with perhaps, a worthless queen in a

large hive, expecting great results. Now, we do not say that every one will like this arrangement of frames, but we say that, so far, we are very much pleased with it, and from our experiments last summer, we are pretty confident that we can control swarming to suit ourselves, in such hives. Mr. D. L. Adair has worked his sections in this manner for years, if we rightly understood him. We do not advise everyone to go into this arrangement extensively; but make a trial of it at first with a few hives. The only thing that we were disappointed in was this: Some of our queens occupied the entire twenty-six frames with brood, which left very little room to store honey, and this was the very reason why our thirty-two frame hive gave us the best satisfaction. Now, after taking into consideration your honey resources, and trying some few of these hives, take into consideration also the extraordinary yield of honey in this locality, and the enthusiasm of your humble servant. Each individual must judge for himself whether this hive will suit him.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

A Few Inquiries.

ED. BEE JOURNAL:—Will you allow me to ask Mr. W. R. King, of Kentucky some questions with reference to his description of the fertilizing house, &c., that he used last summer, and described in the February number of the Journal, p. 177.

1st. Why do you put sweetened water and honey into old honey combs and place them on a shelf in the house (fertilizing room) if the workers are not permitted to fly in the room?

2d. Is there no danger of the queens entering the wrong hive, fertilizing box, and destroying each other when they return from their wedding flight, if several are in the house at the same time? And if so, how can it be prevented?

3d. Must the top of the house be dark colored and why?

Brown muslin would be more durable and it could be painted, which would make it still better to turn the rain.

And now, Mr. Editor, I intend to construct a fertilizing house next summer upon Mr. King's plan. I failed with N. C. Mitchell's plan, but it might have been my own fault. I will try it again, if I live. I like the Journal *first-rate*, having been a constant reader for five years; I would not take five times what it costs for the knowledge that may be gathered from its pages.

I wish that the Journal would make its visits oftener than it does. Say semi-monthly. I for one will be willing to pay double the present price. Will Novice please tell me where he gets his glass honey jars or cans, I want the best and handiest kind. Put me on the track.

JOHN GARDNER.

Mt. Gilead, Ohio, February 15, 1872.

[For the American Bee Journal.]

Italians in Supers.

MR. EDITOR:—In the November number of the Bee Journal the report of the Michigan Beekeepers' Convention makes me say that "Italian bees could not be made to work in boxes. This is a great mistake. Thanks to Mr. Grimm for expressing his doubt in the January number of my being the author. I suppose the large amount of box honey made by Italian bees which he saw at my home apiary a few years ago is his reason for the doubt.

Any one having the proper knowledge can get more box honey from any Italian bees I have seen yet than from black bees. I can get all the extracted honey taken out of the hive put back again in boxes if desirable. All beekeepers should acquire the knowledge to manage any stock or variety of bees in any condition, so as to have all the different departments of labor carried on with perfect success. If any colony need wax it can be supplied by causing them to secrete it. The cappings of the honey combs, wax standing in the sun partially melted, and melted wax cooled off with sugar grains, to keep the particles of wax separate, can be used as a substitute in a hurrying time. Of course none but experts will know when it is needed, or how it is used.

It has yet to be satisfactorily proven by disinterested apiarians that the light colored, "beautiful, gentle Italian bee that does not sting" will not secrete as much or more wax, or not work in boxes as well as the dark Italians or the black bees. The common reason why some fail to get the Italians to work in boxes as well as the blacks is they work earlier in the spring, later in the fall, and in cool atmosphere, when the blacks do not. The nights being cool, and few bees in the hive at the time, they store the honey in the centre of the hive. If the honey is extracted at the right time, or the combs changed with the cold blooded blacks it will benefit these as well as the Italians. The extracted honey will be clear gain.

Mr. Grimm says on same page: "box honey is most convenient for transportation to market." This is certainly not the case in this section, as we have to accompany our shipments of box honey and handle with great care to keep it from breakage and stealings. This is not so necessary with extracted. The arctic explorers, or the shippers to cold climates, would surely choose a well cured, good, solid article of extracted honey. All dealers would certainly dispense with boxes and wax if they acquire the knowledge, and more especially in the tropics. How will it be with boxes with wax combs? Does it break in the cold? Or does the moth worm hatch out of wax in hot climates? Saying nothing about packing of boxes of combs for the market, or the rough handling, or the smashing up, or the leaking, or the stealing of the boxes by railroad or boatmen.

Having sold our honey, and owning no right to sell hives, we have nothing in the bee line to

sell. Will advertise in the Bee Journal when we do have.

Correspondents sending us questions, when the information requested is all on their side, may send stamp, or we may answer only in the BEE JOURNAL.

J. M. MARVIN.

St. Charles, Ills.

[For the American Bee Journal.]

The Monarda-punctata.

MR. EDITOR:—You must excuse me for troubling you again about that bee plant the—*monarda-punctata*.

I was out again and gathered about three ounces of the seed, which took me about one-half of a day to gather and rub out. I made more particular inquiries about the plant, this time.

It blooms the second year.

Mr. Bailey, who lives in that vicinity, and has kept bees for the last fourteen years, has not lost a swarm in the winter during that time, and attributes his success in wintering his bees, mainly to the *monarda-punctata*.

He had a swarm come off on the 3d of August, this year, which has filled its hive with comb and honey from this plant, and is in good condition for wintering.

Other beekeepers in the vicinity seem to be equally successful. Inclosed find a sample of honey from this plant, kindly presented by Mr. Bailey; who thinks it is nearly pure, as there were scarcely any other plants in the vicinity from which honey could be obtained.

This plant produces honey in abundance, and is in bloom from the middle of July until frost comes in the fall.

Bees in other localities about here (except where there was buckwheat) have not done so well. From the middle of July they seemed to be falling off in weight, and are not as heavy at the present time, as they were in July. I think that accounts for so many stocks dying in winter, except in the district where the *monarda* abounds.

I think the name horse-mint will mislead a good many. The horse-mint of this country grows all over the State, even amongst the *monarda*. It grows about three feet high, and bees do not work on it here. It has only one head on each branch. I think this is probably the horse-balm.

JAMES MCCLAY.
Madison, Wis., Oct. 14, 1871.

The sample of honey from the *monarda*, accompanying this communication, is a beautifully transparent, slightly amber colored, and well-flavored article. The introduction of the plant in suitable soils, would doubtless be advantageous to bee-culture, if it yields honey as abundantly as represented. We should be pleased to receive a specimen of the other plant, called horse-mint in that country.—[Ed.]

A Kansas bee tree yielded 300 pounds of honey.

[For the American Bee Journal.]

Non-Flying Fertilization.

MR. EDITOR:—On page 177 present volume A. B. Journal, W. R. King gives his mode of fertilization in confinement, and says make the house eight feet high, board floor and planked up two feet high all round.

I wish to ask Mr. King why he boards up the sides two feet? Would it not be as good only six feet high and cloth from bottom to top, so that two widths yard wide cotton will do. Why the board floor? Would not a smooth dirt or sawdust floor do as well and cost less? Also, why does he put the dark calico over the top? Would not the whole room be better of cotton? If the bright sun rays would attract the bees to the top would it not do to place it under the shade of some thick shady tree. Again, why place the old combs on a shelf filled with sweetened waters? He says there is to be no bees let fly in this house except the queen and drones; were queen and drones ever known to take food away from home? Mr. King please tell us through the Journal—next number—as we want to be getting ready in time.

H. NESBIT.

Cynthiana, Harrison Co., Ky. Feb. 15, 1872.

[For the American Bee Journal.]

A Temporary Bee Room.

Our cellar is a very wet one naturally; in fact there are two springs in its bottom, from which water rises most of the time during the year. Hence, at first thought one would consider this a rather unfavorable place to rig up for a winter depository for bees. But we had the bottom covered four inches thick, with small stones, and then cemented on top of this so that we have a nice dry bottom now—the water passing off to the drain between the rocks, which afford complete drainage. It was not convenient to have a room partitioned off permanently in our cellar, as it would be very much in the way during summer; so we have made one temporarily, as follows: We put down scantling, one inch by three, on the cement, where we wanted our partition, and on this we set our posts (joists 2x2), and nailed them to the sleepers above; then “too nailed” them to the scantling at the bottom, leaving space for door at one side. On these posts we nailed pieces of 1x3 scantling, one piece at the bottom the whole length, and 2 feet 9 inches above we nailed another piece of the same, and so on to the top. We then put on heavy untarred sheathing paper, three feet wide, tacking it to the pieces of scantling at each edge, just enough to keep it from falling. When all was on, we went over it and tacked on laths lengthwise where each two sheets met, which holds it firmly in place. The door to close the entrance, is a scantling frame covered with the paper, like the walls. A wooden tube lets in air from outdoors, while an eight inch funnel (made by bending a

piece of the same sheathing paper up, and securing it in place by driving small tacks through the paper into a narrow strip of wood along the inside,) passes from the bee-room up into the room above, and connects with the flue of a chimney. Shelves are arranged in the inside, on which our bees are passing the winter in perfect quiet, and enjoying a clear, dry and wholesome atmosphere. A man will take the whole thing down in two hours in the Spring, and pack it away for another winter.

COST OF THE STRUCTURES.

20 yards of paper.....	75 cents.
50 feet joist and scantling..	75 “
1 day's work of man.....	1 50

\$3 00

G. W. P. JERRARD.

Levant, Me., Dec., 1871.

[For the American Bee Journal.]

Answer to A. Grimm's Puzzle.

Sometime last August I removed a fertile queen from a nucleus for the purpose of rearing another from a cell which I had ready to insert. Next day I opened this nucleus to insert a cell, and found the bees all quiet. I had not then time to ascertain the cause of this quietness, but inserted the cell. Two days after I opened the nucleus again to see whether this cell had hatched. The cell was destroyed, and the bees were all quiet. I then made an examination, and on the second frame found a well known queen with defective wings laying profusely. I knew at once where this queen came from. Four feet directly in the rear of this nucleus stood another, with a defective wing queen that could not fly. As she was a fine and large one I hated to kill her, and while thus hesitating Mr. W. R. King visited my apiary. I showed him this queen, and told him my intention to kill her. He, however, advised me not to do it, but to pile saw dust around that nucleus, or spread a cloth around if I had not the saw dust. I did the latter, and missing the queen from the nucleus I immediately inserted a cell in it, thinking that she was lost. But I was glad to find her again and fertilized.

I had a few days previously received some drones from Mr. Nesbit, and distributed them among these nuclei. This queen must doubtless have met the drones on the ground, for I pitched her up in the air to show a company of visitors that she could not fly. I have her now in a full stand, and saw her last week all right. The queen I took out of that nucleus was sent off.

R. M. ARGO.

Lowell, Ky., Jan. 9, 1872.

The Michigan farmer, who, in addition to his profits from produce, made this season, three thousand dollars by the sale of his honey, has derived as much income from mere *beeing* as from actual doing.

THE AMERICAN BEE JOURNAL.

Washington, March, 1872.

Death of Samuel Wagner.

READERS OF THE BEE JOURNAL:—Your dear old friend, the honored editor of the American Bee Journal, is dead. On Saturday, February 17th, he awoke early, partially dressed himself, and was talking pleasantly with his wife, when he was suddenly seized with shortness of breath, soon became unconscious, and in less than fifteen minutes breathed his last. The physician pronounced his disease to be aneurism of the heart. He had complained for more than a year of pain and numbness, interfering greatly at times with the use of his pen.

A noble, unselfish, good man has fallen. In the full vigor of his intellect, with judgment unimpaired, and memory wonderfully tenacious. Nearly seventy-three years old! How few of the readers of the Journal could have imagined that its vigorous editorials and wise management were the products of a man who had reached an age when most men are comparatively useless.

If he could have chosen for himself, it would have been to die thus with the harness on; to pass by the shortest transition from useful happy work to the better land.

Few know how much Mr. Samuel Wagner has done for the promotion of bee-culture in America. Being able to read the German fluently*—indeed, until he was nearly ten years old he spoke no English—he had taken all the numbers of the *Bienenzeitung* and other German bee journals, from their origin. His library is unquestionably the choicest repository in America, of German bee literature, and probably the fullest in this department, of any private library in the world. Better acquainted with the history and literature of bee-culture than any man in America, perhaps than any living man—seldom if ever forgetting a single fact once lodged in his extraordinary memory; he was so modest and reserved, that only those who knew him well, understood the wide range of his reading and investigation.

Unselfish to an unusual degree, he cared comparatively little for money or applause, but kept steadily

* We forgot in the February number of the American Bee Journal, to give the proper credit to Mr. Wagner for his translations from the *Bienenzeitung*, given in the article on the Berlepsch frames.

† It is with deep regret that we announce that no likeness exists of our venerable friend. He shrank so instinctively from everything having the least appearance of personal display, that he could never be prevailed on to allow his portrait to be taken.

in view the advancement of the true interests of bee-culture, making his varied information contribute to the wider diffusion of all that pertained to the true theory and practice of his favorite pursuit. While specially familiar with everything pertaining to this subject, he was well versed in the civil history of his country, and intimately with the ecclesiastical history of the German Reformed Church, in which he had served for many years as an honored elder. There were few subjects, indeed, on which he could not converse with ease, and by the extent, variety and remarkable accuracy of his information, he was one of the most delightful companions to all who enjoyed the pleasure of his acquaintance.

It is very difficult to realize that all these stores of instructive and entertaining knowledge lie buried in his tomb, and nothing but a firm belief in the wisdom and goodness of that merciful Father, in whom he trusted, can reconcile us to his loss. He who hath brought "life and immortality to light in the Gospel," knows best when and how to summon his children to their unclouded splendor.

L. L. LANGSTROTH.

Samuel Wagner was born at York, Pennsylvania, August 17th, 1798. His father was at that time pastor of the German Reformed Church in that borough. Having accepted a call from the German Reformed congregation at Frederick, Maryland, he removed there. Mr. Wagner there attended the parochial school attached to the church. In 1810, his father resigned, owing to ill health, and returned to York, where he shortly after died. Mr. Wagner was then sent to the York County Academy, where he received his education. After leaving the academy, he engaged for some years in mercantile pursuits. In 1834, he purchased the York Recorder. In 1839, he sold the York Recorder to Mr. T. C. Hamley, and removed to Lancaster, where in 1830, he established the Lancaster Examiner. Receiving the offer of the cashiership of the York Bank, he sold the Examiner to Hammersley & Richards, and returned to York, holding the position of cashier till April, 1862. In 1863, he accepted the position of disbursing officer of the Senate. Resigning this position in 1868, he, for the few remaining years of his life, devoted all his energies to the editing and management of the American Bee Journal, which was to him a labor of love.

Accident to Rev. L. L. Langstroth.

On Friday, January 26th, Mr. Langstroth fell and had his left foot severely injured by the wheel of a street railroad car. He was on his way to my father's house, and was at once brought here by the superintendent of the railroad. At first, it was feared that all the toes except the large one would have to be entirely amputated, as the bones of all of them were broken; the small toes were deeply lacerated by the

flange of the wheel, and several bones on the instep broken. From the first, however, he has suffered comparatively little pain from so severe an accident, and the wound has healed so favorably, that no operation will be needed. A very heavy boot alone saved his foot from being crushed to a jelly.* The articles from Mr. Langstroth's pen, written while confined to his bed, will be gratifying to our readers, and we cannot but esteem it providential that he was here when my father died, and able to prepare the obituary which appears in this number.

G. S. WAGNER.

To the Friends of the American Bee Journal.

It is hardly necessary to say, that the American Bee Journal will not die with Mr. Wagner. He was maturing a plan for illustrating it largely, so as to place it in the very front rank of progress and improvement; and was promising himself the pleasure of relief from the mere drudgery of business details, while he devoted himself more exclusively to his work as editor. His Journal will continue to be conducted in the interest of no hive or clique, but will be the same honest, intelligent and reliable publication that it has been from the commencement, its pages open to every man who has any decent utterance for or against any hive or any theory in bee-culture—such a publication, in short, as the intelligent beekeepers of America demand and will have.

The readers of the American Bee Journal, who have so often feasted on its treasures, and who feel how much they are indebted to it for success in their favorite pursuit, will doubtless be anxious to know how they can best show their appreciation of the pre-eminence services which the late Mr. Samuel Wagner has rendered to the cause of bee-culture. Friends, rally round the Journal! Let all arrearages be promptly paid up, and let every one try, with that hearty determination which commands success, as soon as possible to remit money for new subscribers. That you may be the more zealous in so doing, bear in mind, that for a considerable time Mr. Wagner published this Journal, not only without any remuneration for his services as editor, but at a considerable pecuniary loss. At last it has become more than self-supporting; its list of subscribers has grown more rapidly of late than ever before, and is one of the most permanent of any periodical in the land. Not by puffing and other more questionable methods so widely practiced by papers which have no real merit, but by honest, persistent, intelligent work, he had reached a point, where it seemed that his largest expectations would be fully realized; that the American Bee Journal would

* Mr. Langstroth has for years when travelling purchased tickets of the Railway Passengers Assurance Company. He did so on this trip, which entitles him to thirty dollars a week while he is laid aside from attention to his business.

not only do a great work for the beekeepers of this land, but would afford him a support in his old age, and be a valuable property to be bequeathed to his family.

I know too well the large number of generous men who appreciate this Journal, to doubt that they will now come forward with new zeal, and will, both as a duty and a labor of love, do all that needs to be done to carry out his plans, and thus continue to make Samuel Wagner's American Bee Journal the highest standard of authority in everything pertaining to practical and scientific bee-culture.

L. L. LANGSTROTH.

Washington, Feb. 22, 1873.

Sugar Syrup Dysentery and the Hruschka.

Novice's observations, shown to me by Mr. Wagner, that bees when wintered on sugar syrup, in their first flight do not discharge feces like those fed on honey, is entirely new to me. I have repeatedly wintered stocks on sugar syrup, having in one very poor season fed it to nearly one hundred colonies, which, in the month of September, had only a few weeks' supply of food on hand. If properly prepared and seasonably fed, it seems to answer, to say the least, as well as honey. Both Mr. Wagner and myself have this winter had numerous letters, informing us that the mortality among bees from dysentery has been unusually severe. Several persons have attributed it to the large quantities of new cider stored up by the bees. In many localities, large quantities of very thin honey were gathered too late to be thickened or sealed over by the bees. This thin honey in cold weather soon becomes thinner still, and then by fermentation sours, and is almost sure death to bees, especially if they are entirely confined to their hives. I believe that the Hruschka will probably afford us an effectual remedy against this cause of dysentery; for all this thin honey can be emptied, and if the bees have not sufficient winter stores, it may be replaced with sugar syrup. The thin honey may be reduced by heat to a proper consistency, to be used as spring food, or perhaps at once safely fed to the colonies from which it was taken. There is often enough of this late gathered honey to injure, if not entirely destroy a colony which has enough winter food without it.

L. L. LANGSTROTH.

NOTE.—It seems to me that Mr. Gallup, or some other correspondent of the Journal, has emptied the thin honey to protect their bees from dysentery, but I cannot refer at this time to their communication.

✂ We hope shortly to present to our readers translations of some unedited letters of Huber, which are full of interesting facts relating to the experiments of that great apiarian. They will be accompanied with notes by the Rev. L. L. Langstroth.

Mel in ore, verba lactis,
Fel in corde, fraus in factis.

Medieval Latin.

With honeyed lips and creamy words,
His heart is gall, and all his acts are frauds.

Personal—"Homer A. King, the Eminent
Apiarian.*"

Those of my readers who saw the American Bee Journal for April, 1871, are aware that in stating the matters at issue between Mr. King and myself, I used no language in the least derogatory to his personal character, or that by the severest construction could be deemed lacking in courtesy towards him. Had he chosen to carry on in the same spirit, the controversy as to the validity of the Langstroth patent, and his alleged infringement upon it, nothing would have appeared in the columns of his paper or of the American Bee Journal which might not properly have been said by Christian gentlemen: So soon, however, as Mr. Otis refused to listen to his propositions for compromises, and I assured him personally that nothing short of a legal decision sustaining or invalidating the Langstroth patent would ever satisfy the beekeeping public, he began to assail me and the late Samuel Wagner, who had so ably exposed the worthlessness of his patents, with the most bitter personalities; to represent me as the mere introducer of foreign inventions, and as sustained by Mr. Wagner in patenting them as my own, in order to deprive others of the honor which was their due. In the December number of his paper, these attacks were brought to a focus, intended if possible to consume us. Not contented with assuming that the works of Debeauboys, Munn and Berlepsch had fully anticipated all my claims, he suggested that I had procured the re-issue of my patent through a purchasable patent office examiner, and that Mr. Wagner had aided me by his knowledge of German bee-culture, to patent a foreign invention as my own. He even went so far as to insinuate that I was acquainted with one Backhaus, to whom Berlepsch says he sent some hives with frames in 1851, thus endeavoring to strengthen the conjecture of the Baron, that I copied my invention from him.

"Cælum non animum mutant qui trans mare currunt."

The same unscrupulousness which he has shown in all this controversy in this country, he carried with him over the ocean, and by the grossest misrepresentations, induced an honorable man to assail publicly one who had always spoken of him with respect.

"Alas!

Some minds improve by travel—others rather
Resemble copper wire or brass,
Which gets the narrower by going farther."

If, in his abuse of a man who less than a year ago he professed to love almost as well as David

* See Fowler's Journal of Phrenology, Feb., 1871, p. 123.

loved Jonathan, he had ventured to insinuate that I had something to do with the loss of his stolen documents, it would not have surprised me, for this would have been mild compared with his attempt to fasten upon me the brand of perjury, bribery, subornation of perjury and swindling; perjury, in swearing to the invention of another as my own; bribery and subornation of perjury, in purchasing of a sworn official a reissue to which I was not entitled; and swindling, in selling to the public a patent to which I had no valid title.

When this December number came to my house, freighted as it were with maledictions, aimed not merely at my property and rights, but at my reputation, and that of the most noble and generous of friends, I was laid aside from all ability to use either mind or body to any advantage; suffering from a cruel malady, to which I have been subject from my college days, and which has caused the loss of more than one-half of my time for the last twenty or more years—when this deadly missile came to my house, my family hesitated for some time to put it into my hands, dreading its effect upon me in my suffering condition. Deciding at length that it would be wrong to withhold it, it was given to me for perusal. Thank God! instead of harming me, it proved the very best of tonics; nay, rather like an *electric shock*, it raised me from my torpor, set my mind almost instantaneously to work, and shortened by months the usual length of my attacks, so that soon, pen in hand, I was devising what reply ought to be made to its many misrepresentations.

Could I for a moment forget that less than a year ago, this Homer A. King, professed, *after notice had been served upon him of the Otis suit*, the most unbounded friendship for me; that I had published nothing which might not have been said against the most honorable opponent, and that when he found that I would not impede the efforts of Mr. Otis to test the validity of my patent—"only this and nothing more"—he fell upon me with fury, and in almost every number of his paper sought to consign me to "the bottomless pit of public condemnation." (See June, 1871, No. of his paper). No! I could not forget, that to these charges I had made no reply, and that his audacity seemed to be increased by my silence. It was under these circumstances that I still determined to deal as little in personalities as possible, but by adhering strictly to the facts, to protect my legal rights and the rights of those who had purchased under my patent. After doing this in as courteous a manner as seemed possible, I closed my article in the February number of the American Bee Journal with these words:

"Does Mr. King, when suggesting that I might have bribed the patent office examiner, or that I might have conspired with Mr. Wagner to patent a foreign invention as my own, suppose that the beekeepers of this country will consider him as using the legitimate weapons of an honorable warfare, or that they will ever give credit to such unworthy insinuations?"

Since this article was written, Mr. Samuel Wagner has died, and I know that his many

friends will insist that the man who has heaped upon him such shameful misrepresentations and slanders, shall be shown in his true character. Other facts also have come to light, and I feel it is no longer possible for me to hold any terms with a man so steeped to the lips in falsehood, slander and hypocrisy as is Homer A. King. However strong are my provocations, I believe that I shall not only say nothing which is not strictly proper, but I *know* that if the public could be made acquainted with the true history of this man in his relations to bee-culture, they would see that *I have still kept back some TREACHERIES which would be more damaging to him than any which I have yet given to the public.* When the beekeepers of this country have before them the evidence that this man scruples at nothing that he thinks can be made to promote his purposes, I have no fear that they will blame me for at last speaking with a plainness that cannot be misunderstood, or that they will fail to see that in self-defence I have been driven by Mr. King himself to expose the duplicity which has marked his conduct since he first declared war against Mr. Wagner and myself.

In the November number of his paper, Mr. King has the following characteristic utterance: "We hope no one will accuse us of electioneering for office this year. We shall not be a candidate, neither shall we help to elect a man for president, as we did last year, merely to confer an honor upon him, and who has boasted that his election to that office was an acknowledgment of his claims." This means that being unanimously chosen president of a convention of beekeepers, many of whom had rival and perhaps conflicting patents, I have been mean enough to abuse their confidence by boasting that it was an admission of the validity of the claims of my patent as against theirs! Let us look at the language I *have* used, and see if it will warrant any such construction. "The generous treatment which I have received from the two beekeepers' conventions at Indianapolis and Cincinnati, has, I trust, put to rest forever all the aspersions which have been heaped upon me by ignorant or designing men, as being the mere *introducer* of a foreign invention, which with some unimportant modifications, I am charged with having patented, and attempted to palm upon an unsuspecting public as my own." If ever those charges are again made by those who know the facts, they must renounce all claims to truth, honor, or even common decency. I shall not insult the common sense of my readers by seeking to show that only the vilest misconstruction of my language could distort it into any such boasting as Mr. King alleges. I was mistaken, however, in supposing that anything could ever put to silence the aspersions of *designing* men. The charges *have* been made again, and by one who, from what he saw in Europe, was better qualified than almost any other man to know the facts, and by making such charges *he has renounced all claims to truth, honor, or even common decency.*

It is well known, that Mr. King was elected secretary of the beekeepers' association which met in Cleveland last December. In the January

number of his paper, he has as secretary given the proceedings of that body.

In his report of the proceedings of that body, he gives a description of a certain hive embracing all the features of the hive patented to me in 1852, and says "*he speaks advisedly*" when he declared that these features were invented by Mr. A. F. Moon over thirty years ago.

Did the association authorize this utterance of Mr. King? did they require him to inject it into the body of his report, that it might go as it were by their endorsement to every part of the beekeeping world? Not one word was said about this matter in their public proceedings, and it was left for Mr. King to do the very thing of which he so falsely accused me, viz.: to use dishonestly his position as an officer of the association, to promote his own selfish interests by trying to damage the claims of others!

Those who have read Mr. King's various communications since this controversy began, cannot but have noticed his frequent professions of being governed by high Christian motives, and his assertions, that under the severest provocations "God still gives him grace to love his enemies." Judged from the tenor of such remarks, coupled with the oft repeated affirmations, that "his non-resistant principles would almost compel him to acquiesce in unjust demands," or "to proffer honorable compromise to legal controversy," one need feel no surprise that he should interlard not only his conversations and letters, but even his *telegraphic communications*,* with such suspicious religious utterances. If we give full credit to the sketch of his life, published in the Phrenological Journal for February, 1871, we must agree that he is almost worthy to be canonized as a saint.

"Active out-of-door exercise having now restored the health of Mr. King, his impulses of duty again called him to the home missionary field. A peculiarity in his labor was, that he never received any pay for his ministerial work, not even for travelling expenses, when called to journey for the benefit of his fellow men many miles by rail. This has given him great power with skeptical minds, since they could not question the purity of his motives, and the sincerity of his purposes.

"The business, however, to which he gave such impetus, now began to feel the effects of his absence, and yielding to a strong outside pressure, upon mature deliberation, he decided to return to his business, under the solemn vow that he would use all his surplus income to advance the holy work to which he had devoted his youth."

"Alas! however, for the rarity of Christian charity, under the sun!" It is to be feared that this revelation to all the world of solemn vows, which would otherwise have been known only to Mr. King and his Maker, will be regarded by most persons as a positive violation of the command of the Master:

"Therefore, when thou doest thine alms, do not sound a trumpet before thee, as the hypocrites do in the synagogues and in the streets, that they may have glory of men. Verily I say unto you, they have

* One telegram to me begins thus: "I feel to bless and curse not."

their reward. But when thou doest thine alms, let not thy left hand know what thy right hand doeth."

In all sober verity, such parade of almost saintly perfection, is utterly abhorrent to every right minded man.

Dickens, in his *David Copperfield*, which of all his fictions he says he likes best, has painted in colors which can never fade, a certain *Uriah Heep*, who in his career well nigh exhausted all the heights and depths and lengths and breadths of the *humility dodge*. Was it reserved for Homer A. King to put the *religious dodge* to the same varied uses?

The celebrated poet, Thomas Hood, must have been an indignant witness of the painful union of religious professions with very unreligious acts, or his pen could never thus have consigned them to perpetual infamy:

"With sweet kind natures, as in honeyed cells,
Religion lives, and finds herself at home;
But only on a formal visit dwells
Where wasps instead of bees have formed the comb.
Shun pride, O man! whatever sort beside
You take in lieu, shun spiritual pride!
For of all prides, since Lucifer's attain, the
The proudest swells a self-elected saint.
A man may cry Church! Church! at every word,
With no more piety than other people—
A daw's not reckoned a religious bird
Because it keeps a cawing from the steeple.
The temple is a good, a holy place,
But canting only gives it an ill savor;
While saintly mountebanks the porch disgrace,
And bring religion's self into disfavor!
Behold yon servitor of God and mammon,
Who binding up his Bible with his ledger,
Blends Gospel texts with trading gammon,
A black-leg saint, a spiritual hedger,
Who backs his rigid Sabbath, so to speak,
Against the wicked remnant of the week,
A saving bet against his sinful bias—
"Rogue that I am," he whispers to himself,
"I lie—I cheat—do anything for pelf,
But who on earth can say I am not pious!"

Some of my readers may question whether I have weighed carefully the risk of exposing a man who has at least two presses under his control, and an organized body-guard of infringers upon my patent to do his bidding. Others may fear lest on the principle of the old law maxim, "*The greater the truth the greater the libel*," even the just severity of my language may recoil upon myself. After his December utterances, however, Mr. King has no valid reason for being surprised at my plain exposition of his apiarian career; those December utterances he must know would be pronounced libellous by any honest court and jury in the land.

If there are any of my readers to whom my language may seem unjustifiably severe, I would say that they will probably think otherwise when facts are presented to them as they must be, still more damaging to Mr. King.

Beekeepers of America! as I think of the late Samuel Wagner, I feel that it was laid upon me as a sacred duty, to expose the man whose calumnies followed him to the very moment when he sank in unconsciousness; and have, even after his death, though this could not have

been intended, have been sown broadcast over the land by M. E. Williams, associate editor with Mr. King. Williams' article, as full of baseness as though dictated by King himself, will be given in due season, with suitable comments thereon, to the readers of the American Bee Journal, who will then know more fully under what a sense of moral indignation I have penned this personal.

L. L. LANGSTROTH.

Washington, D. C., Feb. 23, 1872.

[For the American Bee Journal.]

Pate ted Honey Boxes.

On page 136, of the December number of the Bee Journal, Mr. George T. Wheeler informs us that he has patented a honey box. We mentioned that kind of honey boxes in the "ANNALS OF BEE-CULTURE" for 1870. Mr. William Plocher, of Fairwater, Fond du Lac county, Wisconsin, an intelligent German beekeeper, who has Huber's work and several other German treatises on bees, has used that device for years, and is now using it. What sense is there in running to the Patent office, with every old notion that we have re-vamped?

A friend of ours in Upper Canada, has hit upon the same principle as our new style hive; and he informs me that he has used it the past season with the greatest satisfaction. And we do not know how many more have hit on the same principle. Now, suppose we had galloped off to the Patent office, and paid Munn & Co., or some other Co., a large fee, we could no doubt have succeeded in making a donkey of ourself, just as hundreds of others have done before for themselves, and as many more will probably keep doing. Just so long as our Patent office is managed as it is and has been, you may depend on it there is and always will be a screw loose somewhere.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Bees at Lucknow, Canada.

MR. EDITOR:—In looking over some of the back numbers of the Journal, I saw an account of the reason for bees leaving for the woods, which brought to my mind an incident connected therewith, which was this. I met one of my neighbor's boys one morning, of whom I inquired how his father's bees were doing. He replied, "very well, only we lost one swarm yesterday." Ah! said I, how was that? "Well," replied he, "yesterday was a very hot day, and a fine large swarm came off and lit on a currant bush. Father said it was too warm to put them in a hive then, and he would leave them till evening; but when evening came, they were gone." Ah! said I, Charley, if you had subscribed for the AMERICAN BEE JOURNAL two years ago, as I wanted you to do, your swarm, to say nothing else, would have been worth the whole price.

Well, I met the father a few days after, and wanted him to let me send for the Journal for him; but, no, he could not afford it! Mr. Editor, this was a year ago, last June. At that time he had three stocks. Now they are like the meat a man was trying to sell. When asked, if he had killed it, he said no! Did it die? No, *it just gin out!* So with my neighbor's bees—they "just gin out!"

I have never known of a swarm of bees, in my experience, to leave without clustering first; and for myself I have had no trouble in getting swarms to stay, when put in a good clean hive.

I made a slight move last summer, in the Italian bee direction; and received a queen from Mr. A. Grimm, and let me here say, that I consider him very prompt in his dealings, as I got a return in one week after sending. Well, I got my queen introduced all right, but in looking through my stocks three months after, I found my treasure dead on the alighting board, and the hive left queenless. So I am set another year behind in Italianizing, but intend to try again next year, if nothing happens to prevent.

My bees are wintering nicely so far, thanks to Mr. Gallup. May his shadow never grow less. How I should like to take a few lessons under his guidance.

Hoping I shall be able to increase your subscription list before long, I remain, yours, &c.

GEO. T. BURGESS.

Lucknow, Canada, Dec. 18, 1871.

[For the American Bee Journal.]

Introducing a queen into a hive that has sent off a prime swarm.

If I remember right it is stated somewhere in the Journal that a fertile queen bee can be successfully introduced into a hive that has given a prime swarm, if this be done at the moment when swarming has ceased. I tried repeatedly to introduce fertile queens three days after swarming, keeping them caged the previous three days; and though I destroyed every queen cell before liberating my queens, I lost them in every instance where I had not removed the parent stock to a new location. Only when I waited till the seventh day after swarming, destroyed all the queen cells, and the queens already hatched, (if any) likewise, and then delayed six hours longer, could I succeed invariably by simply liberating the queen at the entrance of the hive.

Last summer I tried the method claimed to be uniformly successful, and have to report that I failed four times out of six. Only two queens were accepted, and the two stocks that accepted them, proved to be as productive in surplus honey as other strong stocks that had given no swarms; while the four that killed the offered queens and gave no second swarm, gave me no box-honey at all. I cannot estimate the value of a fertile queen thus successfully introduced in the first half of the month of June, at less than seven or eight dollars. But if we should

always lose four out of six queens, it would in the end be a poor speculation to introduce fertile queens into hives that have given prime natural swarms. I suspect that others had better success, or they would have reported their failures. I report my experience only to caution others not to risk valuable queens in this manner as I did. I am well satisfied that an apiarian will much improve many of his mother-stocks, by selecting and inserting a sealed queen cell from a hive that has given a prime swarm a week previous and has piping queens. The stocks so treated will not swarm a second time, and have a fertile queen almost as soon as one can be successfully introduced.

ADAM GRIMM.

Jefferson Wis., Dec. 27, 1871.

[For the American Bee Journal.]

Chloroform and "Blunders."

MR. EDITOR:—Have any of the subscribers to the Journal ever used chloroform in handling bees? If so, how does it work? I do not believe it will work well; but one of my neighbors says he will try it next season, if he loses a few swarms by it.*

In my communication in the January Journal, you give the date of my transferring two stocks of bees to movable comb hives as August 21st. It was done August 29th. You also make it read "three hives full," whereas it should be "their hives full."†

Now I want to take up brother Gallup, for he has infringed on my hive, and goes galloping over the description of it as if he was the sole inventor. Now I have been thinking of this kind of hive for the last six months, and in fact my hives for the last year were of the same size, except in length. I only had ten frames instead of twenty-four and thirty-two. Now I have one made with twenty-six frames, and am going to see if I can get fifty (50) gallons of honey from it next season. At all events brother Gallup did not get the dollar from me for a description of my own hive.

I want some Italians next season and shall probably call on brother Grimm, or some other reliable queen raiser for a supply.

With many good wishes for the success of the Journal, I remain, as ever, truly yours,

J. W. CRAMER.

Onsida, Ills.

* A Number of our subscribers employed chloroform successfully and satisfactorily last summer, using one-tenth or one-eighth of an ounce for a dose.—[Ed.]

† These were typographical errors, which despite of every care, are as apt to occur in our own articles as in those of our correspondents. They are annoying and vexatious, especially when *queen* cells are converted into *green* cells, and *frames* into *franes*. If the *can* were always forthcoming when the latter metamorphosis takes place, we should incline to cry *eureka* and think the *philosopher's stone* was found at last, for that would indeed be a substantial transformation.—[Ed.]

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

Vol. VII.

APRIL, 1872.

No. 10.

[For Wagner's American Bee Journal]

We promised to give our readers, with suitable comments, the attack on Mr. Wagner by Mr. King's associate editor. We shall preface this attack, with an editorial from King's February number, to show that his paper endorsed it.

"Those who have read Mr. Wagner's 'slang' notes about the person who has brought the facts to public notice, concerning the invention of movable frames, will discover the fallacy of Mr. Wagner's statements, by remitting 25 cents to Messrs. Moon & Mitchell, for copies of the *National Bee Journal*. For replies by Mrs. E. S. Tupper, send 25 cents to her, Des Moines, Iowa, for copies of the *Iowa Homestead*."

[For the National Bee Journal.]

Sneaking out a Patent.

MESSRS. EDITORS:—To most of the scurrilous attacks and mean insinuations of Samuel Wagner against Mr. King, the latter has not deigned to reply, and to our knowledge he has more than once refused the columns of his journal for these personal affairs, even though written by others in his own defence. We shall not call in question the wisdom of his course, for when contrasted with Mr. Wagner's, even the latter's own friends cannot but admit that it is the wiser of the two. It is generally true that slanderous reports will not injure, unless by combating them we give them standing and character. But there are occasions when "forbearance ceases to be a virtue;" when if a man does not raise his voice in defence of his motives, or character, he will have the one impugned and the other injured by the falsehoods of envy and malice. From our position as Associate Editor of the *Bee Keepers' Journal*, we have had every opportunity of becoming familiar with all the facts of the present controversy, and shall therefore speak advisedly in answering a few of Mr. W.'s "foot-notes" and editorial vents of impotent rage.

We are informed that Mr. W. is an "old man," and this fact is frequently brought forward to excuse his conduct. Were we to judge of his age by these personal attacks on Mr. King, in defence of his hive interests, we should unhesitatingly pronounce him a *very young man*, for

they exhibit only the rashness of youth, and not the experience and sober thought of a mature mind. The only way we can reconcile his injudicious course, his "storms of blind fury," with the reports of his great age, is on the supposition that he is now in his *second childhood*.

Mr. W. warns the writer of an article in his last journal, to be on his guard lest Mr. King, whom he courteously denominates "The Great American Humbug inventor," should "sneak out a patent," on something mentioned in his article. We once heard of a man who insanely supposed he was monarch of the whole earth, and who raved incessantly because men did not come and reverence him. Mr. W. is almost *there*, for he arrogantly assumes that all matters pertaining to apiculture must be referred to him, and if a man obtains a patent on any device to advance bee-culture, without his knowledge and consent, he "sneaks it out." This is just what Mr. W. meant by *this* expression, and we propose to substantiate it, and to show who "sneaks" and how it is done.

By the rules of the Patent Office, no officer, clerk or employee is permitted to give any information concerning the application for a patent, or the proceedings during its examination, except to the inventor or his authorized agent. Yet it has been long reported that Mr. Wagner was intimate with Patent Office officials, and being better posted on bee matters than they, was generally consulted when applications were made for patents on bee hives, and *owning territory in the L. L. patent*, he had always done what he could "thus sneakily," to prevent the issue of such patents. These reports were recently confirmed by a prominent member of the Cleveland Association, from the South, and there is no doubt of their truth. When Mr. Quinby made application for a patent, he thought of going to Washington himself, but his agent thought there would be no difficulty in securing it, and he did not go. The consequence was his application was rejected "because the device was covered by Mr. Wagner's patent." How was it discovered that it conflicted with Mr. W.'s patent? Wagner's friend, Mr. Bickford, admitted that he (Mr. W.) "happened" to be in the Patent Office when the application was being examined, and was invited into the room to give his opinion on the case.

Thus Mr. Q.'s patent was not "sneaked out," because the "Oracle" had been consulted, but if he had gone there himself and pushed it through, it would have been "sneaked out." These are facts. We expect Mr. W. will deny them, for he has done worse than that. We don't say that he owns territory in the L. L. patent now. Oh, no!

Last spring, soon after the broadside of Wagner, Otis & Co. (with pigtail illustrations), Mr. King made application for a patent. He soon heard that it was rejected, but believing there was no good reason for rejection, he went down and argued it through, and for Mr. W.'s benefit announced it in the *Journal* as "Patent No. 4." We verily believe that Mr. W. was the cause of the first rejection, and believing that he had given it a *quietus*, had retired to his den, and the first knowledge he had of its successful issue, was when he read it in the *Journal*. This explains how it was "sneaked out," and also accounts for the "howl of insane fury" which the great "Oracle" utters in his impotent wrath.

Now, lest future results should seem to confirm the opinion of Mr. W.'s admirers that he is really a prophet, let us explain how he came by his knowledge. Soon after Mr. King's return from Europe, he mentioned, editorially, that his observations during his travels would enable him to perfect certain improvements which would remunerate him for his expense and time, and also be of great benefit to the cause of apiculture in America. While on a tour through the West he incidentally mentioned this to several prominent beekeepers, and among others to the writer of the article to which Mr. W. appends the filthy note from which we learn for the first time that it is possible "to sneak out a patent."

But Mr. W. attempts to avoid the force of the testimony of Mr. Moon and others by asserting that there was "no living principle in any of their devices, and that all were failures." How much such words as "ratiocination," "in terrorism," and comparing all bee hive inventors, except Mr. Langstroth, to skunks—how much these add to the force of his arguments we leave the reader to decide. If there was no "living principle" in their hives, there is none in Langstroth's, for the same principle is involved in both. How could they be failures (through imperfections), and Mr. L.'s a success (because perfect) when the frames of the latter are only a copy of theirs, and when his hive presented *not one additional new feature*, except the moth blocks at the entrance. It is true Mr. Moon did not use the triangular guide, but L. & Co. do not now claim that as their invention.

Is there nothing significant in the fact that Harbison, Metcalf, Langstroth and others began to sell hives extensively about the same time? About the same time, too, that reapers, sewing machines and other improvements were rapidly introduced? The times were ripe for these things, and their introduction was a natural result. That one man should, at that opportune moment, seize on the results of other men's experiments and years of deep thought, and by a combination of favorable circumstances, secure the protection of a patent on a set of combina-

tions, is no proof that he invented a single feature of the device. "Success" is not *always* the infallible evidence of success.

Mr. W. well knows why the testimony of Berlepsch cannot be used as *legal* testimony. But the fact that our laws provide that the prior use of an invention in a foreign country shall not invalidate a patent here, unless such invention shall have been patented, or shall have been described in a printed publication, does not affect the *truth*, stated in the Baron's oath. In that oath he declares that he used the identical Langstroth frame (more properly the Moon frame) *six years* in advance of Mr. L., and that there are many living witnesses who will attest the truth of his statements. Mr. W. exhibits astonishing zeal in trying to make the American public believe that Langstroth is "the original inventor," and in the face of the testimony of such a man as Berlepsch, asserts that up to December, 1851, "and for many months thereafter, there were no practical frames in use in Germany." We are glad he is drawing nearer the truth, though slowly and cautiously. Ten years ago he said Berlepsch "adopted" the frames in 1855; last spring he dropped off two years, and put it 1858; now he says "up to 1851," and the indefinite for "many months thereafter." We hope he has not reached the "minimum," but will yet "drop another cat." Mr. L. himself comes a little nearer the truth, for he says, "after my application had been favorably decided upon, Berlepsch invented frames of a somewhat similar character." But Mr. W. "does not wish to influence public opinion" by publishing the Berlepsch oath. Oh, no! That would be decidedly wrong! Investigation and National Associations were all right last spring; but they are going too far to suit Mr. W.'s ideas of what is right and proper. Credit is given to whom credit is due. Public opinion is changing, and National Associations give expression to public opinion.

But, again, he did not know how much garbling the Berlepsch oath had undergone in Mr. King's hands. He did know that he had "shamefully garbled Mr. L.'s letters to suit his own base purposes."

This is not an "insinuated untruth," but a *positive falsehood*. There is but one letter which Mr. L. ever complained of, but Mr. W. says "letters." Let him produce them. The letter in question is now in this office, and that and the Original Berlepsch Oath can be examined by any one wishing to test the value of Mr. W.'s assertions. An extract from the letter was published in the August number of the *Bee Keepers' Journal* for 1870. There were three paragraphs in the letter. The first related to the death of his son, the second concerning persons whom Mr. L. claimed to infringe on his patent, and the third related to Mr. K.'s proposition to terminate an arrangement which had existed between them. We reproduce the first paragraph here, italicising the words which were not published in the extract:

OXFORD, O., June 27, 1870.

Messrs. H. A. King & Co.,

GENTLEMEN:—My son (J. T. L.) died in Massa-

chusetts, on the 14th, just eight days after leaving home. His health had been failing for more than a year, but he continued to do business until the day he left. He had Catarrhal Consumption as well as heart disease. He was fully aware of his critical condition, and entirely resigned to the divine will. *His wife found your letter of May 30th, in his pocket, and says that if he had not been so very feeble he would have called on you when passing through New York.*

Mr. Quinby was in our office a few days since, and the original letter was shown to him, and compared with the extract given above. One error was found. Mr. L. said "catarrhal consumption as well as heart disease." The extract read, "as well as the heart disease." The word "the" was inserted before the word "heart." What base purpose was served in publishing this extract? Mr. King thought it an act of courtesy to Mr. L. to announce the death of his son, and the reception of such a letter by *any* editor, under similar circumstances, would be accepted as a request on the part of the writer to so announce it. The publication of the business part of the letter would have been sadly inappropriate in that connection, and would have caused greater complaint from the "crew" than even what was done.

This, then, is the "garbling" for a "base purpose" of which Mr. King is publicly accused by the "Oracle" at Washington.

Such accusations show to what extremes the jealous rage of the "old man" has driven him in defence of a sinking cause. All of Mr. King's acts are attributed to "base motives," and are regarded as "poisoned arrows, designed to kill." Even Mr. King's efforts in behalf of Mr. Langstroth, through his journal, and at Cincinnati, were rejected with scorn, and Mr. King accused of "publishing Mr. L. as an object of charity." "What were virtues in other men, are in him vices," for he did not publish his appeal in the *Journal* until Mr. Wagner and Mr. Bickford had made an abortive effort; and at Cincinnati he did not inaugurate the movement till L. L. had been consulted, and to his assent, had added the story of his misfortunes.

More anon,

M. E. WILLIAMS.

Much of Mr. Williams' article needs only a brief reply. To those only tolerably well acquainted with Mr. King's course in this bee-hive controversy, the correct application of Mr. Williams' introductory sentiments will intuitively suggest itself.

The charge that Mr. Wagner having a pecuniary interest in the Langstroth patent,* interfered with the issue of other patents, involves the integrity of officials in the office. We give, therefore, the following statement of Prof. J. Brainard, Chief Examiner, in the class to which bee-hives are attached.

"When I rejected Mr. Quinby's application, I was not personally acquainted with the late Samuel Wagner, and first became aware of his invention, by finding the drawings of his patent for artificial combs, in the portfolio of the office.

* Mr. Wagner owned four counties in this patent.

"Mr. Wagner never solicited or received any information on the subject of pending applications for patents, so far as I am aware, from this office. He never in any way volunteered to give information, but only gave it when specially requested.

"I deeply regret that his death puts it out of the power of the office, to avail itself in the legitimate discharge of its duties, of his extensive knowledge of the history of bee-culture, and the state of the art in foreign countries. J. BRAINARD."

The following letter of Mr. King, in the March 15th number of the "Indianapolis Journal," which has just come to hand, ought to be published in this connection.

[For the National Bee Journal.]

CORRECTION.

MESSRS. EDITORS:—Having been traveling in the west for a month past, I have not seen the late numbers of your valuable journal; but since my arrival here I learn that one of your correspondents* has given publicity to a report that reflects unfavorably upon the decisions of the examiner in charge of agricultural implements. I first heard the story about a year ago, but the Commissioner of Patents† was the party named, with whom I was not personally acquainted; but I have known Professor Brainard, the examiner, for many years, and I assure your readers, that the report, so far as it reflects on his character, must be false. He was professor of chemistry in the Medical College of Cleveland, Ohio, and when he received the appointment as examiner here, he was placed at the head of one of the most important departments in the Patent Office, namely, Agricultural Implements and Products of Agriculture.

It is a common remark of attorneys here, that Prof. Brainard is one of the most thorough, critical and conscientious men in the office. They say his initials are on most of the drawings in his department, and a case is sure to be lost if there is any evidence of priority of invention in any one of the thousands of applications for patents on agricultural implements in his department. It is possible that some seek to obtain patents with money where their case lacks merit, but none acquainted with Prof. Brainard could believe for a moment, that he could be tempted from the path of duty. He authorizes me to say that while it is true that he has consulted Mr. Wagner in reference to his knowledge of foreign inventions, he has never communicated to him regarding pending applications, nor received from him gratuitous advice relating to official business.

H. A. KING,

Washington, D. C., Feb. 26, 1872.

Mr. King it will be seen, sustains Prof. Brainard against his own associate editor.

"That broadside of Wagner, Otis, & Co., with pigtail illustrations!" Alas! Alas!

Hæret lateri lethalis arundo.

Fixed in the side, the deadly dart remains.

Friend Beadle, how could you have the heart to do it? Never again, we entreat you, hang out from your office windows such ensnaring

* Does Mr. King mean to say that his own associate editor, the correspondent referred to, wrote without his advice, consent, or even knowledge?

† Does Mr. King wish to make the late Commissioner of Patents, Col. S. S. Fisher, suspected of being a party to another conspiracy?

"coats," that childlike innocents are beguiled into purchasing them as "perfect fits," and cannot be prevented from parading about in them, to the vast amusement of an unfeeling public!

Does Mr. King desire us to ventilate further, his attempt to make the public believe that he had a patent on a *then unpatented* machine?

We believe that the decision of the United States Courts on the invention of practical movable comb frames, will be more satisfactory to bee-keepers than volumes of controversy between interested parties.

There can be nothing so significant in Mr. Williams' assumed fact, that other parties began to sell movable comb hives about the same time with ourselves, as his ignorance of the true history of such hives in this country. Our hives were largely made, used and sold by us, in the spring and summer of 1852, in our native city of Philadelphia. The patent was issued October 5th, 1852, and the first edition of our work was published in May, 1853. Thousands of these hives were widely disseminated years before Harbison, Metcalf, or any one else, took out a patent on hives using movable frames. From 1852 to 1857, the invention, when not denounced by patent hive-mongers as an impractical conceit, was represented as fit only for *amateur* uses; and only after its success was established, were other patents (infringements if not duly licensed under that of Langstroth's), brought before the public. The second patent on hives using movable frames was granted March 31st, 1857, to Albert Kelsey; the third to Samuel Kelley, Dec. 8th, 1857; the fourth to Kimball P. Kidder, April 13th, 1858; and the fifth to Ebenezer W. Phelps, November 9th, 1858; while Mr. Harbison's did not issue until January 4th, 1858; and Mr. Metcalf's not until July 30th, 1861.

Need we say much more about the *Berlepsch* declaration? We give entire credit to the Baron's statement that he made frames before us, and not to Mr. Williams' that they were identical with ours, for the Baron himself nearly a year after the date of our application for a patent, discredited his own invention as "a mere juggle."

In the supplement to his December number, the Baron's declaration, with King's preface is published with a great display of head lines.

IMPORTANT TESTIMONY!

THE OATH OF AUGUST BARON VON BERLEPSCH—EXPLANATION.

"In the April number of the *American Bee Journal*, 1871, Mr. Wagner offered Mr. King space in his Journal for three months to come to answer the attack made on him in that number. At first Mr. King did not intend to reply at all, but subsequent to his return from Europe, he forwarded the following document to Mr. Wagner, and Mr. Wagner refused to publish it, shielding himself behind the poor defence, "that his offer did not remain open indefinitely." The most obtuse observer, after reading the testimony contained in that document, will discover the *real* reason of his declining it. At the request of several eminent apia-

* We will publish this declaration in full, if any attempt is made to prove that we have suppressed any essential part of it.

rians, some of whom have hitherto been advocates of Mr. Langstroth's claims, and in view of the high character of the testimony, we present it to the apians of America."

Then follows the declaration. In the January number of the Journal, Mr. Wagner gave some of his reasons for refusing to publish this declaration. Does Mr. King think that any one of ordinary intelligence can see in the *Baron's declaration*, a *REPLY* to Mr. Wagner's masterly exposure of *worthlessness of the King patents*?

Mr. King makes an evident parade of what he calls "the oath of the Baron," and we are told that the original oath can be examined at his office. We can find no proof that the Baron made any oath—he merely asserts before the notary public, "I have only made such statements as I can at any time attest to under oath."*

There is something mysterious about this *second* declaration procured by Mr. King to supply his loss of the first, when the *first* is declared to have been "recorded in the Notary's books, number 1643." Why subject an invalid to the trouble, and himself to the expense of a second declaration, instead of procuring a *certified copy* of the *first*? What a waste was there of time and money upon a document *now* admitted to have no *legal* value in the suit, and which, while in many ways damaging to Mr. King, shows only that the Baron used frames (but did not describe them) prior to ours. Was it merely to prove this, that Mr. King volunteered his services as the jealous defender of the Baron's fame, and scattered his declaration thick as Vallambrosa's leaves? And yet, after all this superserviceable zeal, he makes the Baron August Von Berlepsch play only "second fiddle" to Major Augustus Munn, Ambrose F. Moon, and perhaps to some other persons as yet "the great unknown."

When he first shook his magic kaleidoscope of "prior inventors," the face of Major Munn loomed large across the ocean—soon after the Baron's star was revealed, shining however, with a more subdued light—until in a truly auspicious hour, a glorious Moon rises, full-orbed, in our Western horizon, to outshine the first, and ante-date the last!

Neither the Baron nor the Major will, I trust, take any serious offence at this good-natured railery.

When our King crossed the ocean, he probably appeared before each of them in turn, disguised as another "Queen of Sheba," coming from far-distant lands to pay homage to their wisdom. He is a master hand at such enticements.

Would that after a hearty laugh we could stop here. No one who knows us personally, or from our writings for the last twenty years, will think we find pleasure in exposing the faults of others.

* When our readers learn that the Baron is suffering from partial paralysis, and that he could only *dictate* the declaration, they can readily account for its inaccuracies, nor will the absence of a formal oath induce them to believe that a man of the Baron's high standing purposely misstated facts.

We can say as we did in that April number a year ago, not, we trust, in any spirit of boasting, but as what ought to be known to all who read these personals:

"We can confidently appeal to the bee-keeping public who have known our course, to bear us out in the assertion, that we have never personally assailed any one, but have often under circumstances of great provocation, refrained from using very damaging facts against those who have assailed us."

We could no longer pursue the same course, and now, in vindication of our departed friend, we must show some of the "treacheries" alluded to in the March number.

To obtain a license under our patent—after he had been notified by my son (the late J. T. L.), and myself, that he was infringing on it—Mr. King represented his business as so extensive, that the one-twelfth, which he proposed to pay, of the net proceeds of his sales of hives and rights in our territory, would probably exceed all our own. In THREE YEARS we received as our share of his sales, *less than the price paid for some single counties in the Langstroth patent!* and found besides: that we had lost by hampering ourselves in making sales* many times more than the license fees. Some time after we licensed Mr. King to use the notches in his frames, he substituted mortices for them, patented these in combination with some other devices, and claimed that he could use them without our license.†

By the terms of our license Mr. King was expressly *guaranteed from all our claims for his heavy infringements under his first patent.* Now even if the decisions of the court had sustained his substitution of a mortice for a notch, could Mr. King after all the benefits he derived *at our expense* from the license, have honorably refused to pay the petty fees? After many intimations however, that he no longer felt bound by his license, he at last writes us the following letter:

NEW YORK, May 30, 1870.

MESSRS. L. L. LANGSTROTH & SON,

DEAR SIRS:—An apology is due you for delay in replying to your last, which was received during my absence west, but my brother informed me that he replied briefly about our press of business. I still entertain the high esteem for the senior member of your firm, and hope to receive the photograph I once before requested, as I hope to have the privilege of showing in our Journal that we render honor to whom honor is due. In reference to the report, I finally got time or rather took time (a day to look over the books, as we have not trusted to a clerk to record all

* Parties with whom we were negotiating, when they learned that King was licensed in our territory, declined to purchase, or did it only at reduced prices.

† For the facts more in detail, see p. 219 of the A. B. J., April, 1871. We have the best legal authority for the assertion that both slot and mortice are infringements of our patent. *Neither are original with King*—the first having been used in Kelly's patent, December 8th, 1857, and the other, in W. A. Flanders', May 9th, 1867—while King's bears date September 8th, 1868!

‡ No photograph or biography was ever furnished by us. Our friend, Rev. E. Vanslyke, without our knowledge, supplied both.

on a page as in other matters, lest an oversight might occur that you might think intentional), for I am so jealous of my honor, that I have in opposition to my brother, reported for two years under an arrangement that ceased when we ceased to make and sell hives with notches in the top bars, as is proved by several letters of yours which have been forwarded to us without solicitation (only assent).

But he has now met me with a more powerful argument. Heretofore I could say that no change from a notch to mortice was contemplated when the arrangement was made, but now while admitting my answer he says it was understood that others would not be permitted to peaceably infringe upon your patent, but you have permitted them, without molestation, to appoint agents to sell infringing hives in your territory, and this fact discharges us honorably, while the fact that we have for years ceased to use the notch, legally discharges us from the arrangement. I cannot answer this argument and have therefore taken the position kindly but firmly, to cease sending you money for what we do not use. I presume you have too much wisdom and honor to threaten and abuse in a pretended rage, and as I have only now informed you of this position, upon receiving your reply and closing up the arrangement, kindly we will remit for the report made out a few days since to that date.

Yours as ever very truly,

H. A. KING & CO.

This letter insulting us by presuming that we had too much wisdom and honor to threaten and abuse in a *pretended rage*, my son—who until the very close of his life sought to stand between me and business troubles—showed only to his mother, and after expressing his views of the writer, said he would try to call upon him in his journey East. My reply to this letter explains why he did not. A detailed account of all the relations between Mr. King and myself would show that it was written under a deep sense of *accumulated wrongs*—it is enough to say that while this last insult to me and my departed son was quivering in my heart, I duly complied with all the forms of courteous address, in what was intended as a last appeal to any sense of honor or justice in Mr. King's breast. I give the letter:

OXFORD, OHIO, June 27, 1870.

MESSRS. H. A. KING & Co.,

GENTLEMEN:—My son (J. T. L.) died in Massachusetts on the 14th,—just eight days after leaving home. His health has been failing for more than a year, but he continued to do business until the day he left. He had catarrhal consumption as well as heart disease. He was fully aware of his condition, and entirely resigned to the divine will. His wife found your letter of May 30th in his pocket, and says if he had not been so very feeble, he would have called on you when passing through New York.

In answer to one remark in your letter I would say, that neither my son nor myself have had the means or health, to prosecute the numerous parties infringing on our rights, and have been compelled to suffer wrong, without any power of redress.

I am too feeble to discuss the question whether under all the circumstances, you ought to account to us any further. At the time of making the arrangement with us, you were aware that your first patent, in which you used the separated frames and shallow chamber, was an infringement on our rights. Bearing this in mind, do what you think to be honorable

and just, and even if I differ in opinion with you, I have neither the health nor disposition to contest the matter.

Yours truly,
L. L. LANGSTROTH.

It was to this letter that Mr. Wagner referred in the January No. of his Journal, when he said—"We do know that Mr. King shamefully garbled Mr. Langstroth's letters to suit his own base purpose." Mr. Williams says this assertion about garbled letters is a "positive falsehood," and that "there is but one letter of which Mr. L. ever complained," but Mr. Wagner says "letters." "Let him produce them." Will Mr. Wagner's charge fall to the ground, if Mr. King has garbled only *one* letter? I hoped for many reasons, never to have been compelled to publish that letter, every thought of which only makes a parent's heart bleed afresh—but Mr. King's authorized champion demanded it, and to vindicate Mr. Wagner, I have produced it. On my own responsibility, therefore, I re-affirm the charge, that the letter was "shamefully garbled"—and if I did not suppose that Mr. Williams is very imperfectly acquainted with the wrongs that I have suffered from Mr. King, I would say that the partial extract and comment, designed to show that Mr. King fairly reproduced it, is almost as bad as the original offence. Let it be understood, that my letter was addressed to a man who had appropriated both engravings and ideas from my work on bee-keeping, giving me no credit for the one, and worse than none for the other—who grossly infringed for years on all the essential and patented features of my hives—who after he had secured impunity by the terms of our license, advertised himself not as *licensed* to use *one* feature in our patent, but as having *out of his desire to do justice, purchased a general interest in the Langstroth patent!* Let it be remembered, I say, that this letter was addressed to *such a man*—to whom I had never written a line except on strict matters of business, and in whose paper we had never been willing to insert even a business advertisement—and will it not be judged a *base* act that (omitting the allusion to the sad circumstances under which his letter came to me), he should divide mine into two, and publish the first part of it, as a special letter addressed to himself? How could his readers infer otherwise, than that I must be on intimate terms of friendship with Mr. King, when in my hour of bitterest anguish, mourning over the death of my only son, I unbosomed myself to him! His comments also on this letter make it impossible for any one to think otherwiser.

* * * "We were personally acquainted with the deceased, who was the only son of Rev. L. L. Langstroth, and associated with him in business. * * * He was an affectionate son, and we deeply sympathise with his parents and friends in their bereavement, but especially with his noble father, who has been in feeble health for years, and being highly endowed by nature, education and association with the finer feelings, this arrow of affliction will pierce his heart with such anguish as but few can understand."

Could I keep out of my memory as my eye

first glanced over these kind words, that coarse suggestion that "we had too much wisdom and honor to threaten in a pretended rage?"

I earnestly desire to do no injustice whatever to Mr. King, in the views I cannot but take of this matter. I know that some of my best friends, when they saw this letter to Mr. King in print—knowing our previous relations, felt that disease must have lamentably weakened my judgment or I never could have written it.

Worse yet remains. Let us suppose that Mr. King's sense of honor would not lead him to think that it was anything more than a shrewd business act to publish *part* of my letter as a special letter to himself. What view must we take of the use made of the rest of it? *It becomes a second letter*—and as the first was one of *friendship*, this becomes one of *business*. The following from the August, 1870, number of Mr. King's paper will show how he gave it to his readers:

"We wrote Mr. Langstroth, in May last, offering a small consideration to close up our arrangement, assigning reasons why we were now neither legally nor morally holden, and he replied as follows: "I am too feeble to discuss the question whether under all the circumstances you ought to account to us any further. * * * Do what you think to be honorable and just, and even if I differ in opinion with you, I have neither the health nor the disposition to contest the matter." Yours truly,

L. L. LANGSTROTH.

We made remittance and thus closed an arrangement, the existence of which unprincipled men have used to make the people believe it applied to the use of movable frames, and that our hives could only be used in territory owned by Mr. Langstroth when the arrangement was made."

By comparing the original and Mr. King's version, the reader will be able to see *how* the letter was garbled. He first omits the sorrowful reason given for not prosecuting infringers. Did he wish to conceal from all other patentees of movable comb-hives, whose champion he now claims to be, *that he had asked us to prosecute them?**

He next suppresses entirely a condition essential to the proper understanding of all that follows, and uses just enough as a second letter, to suit his selfish purposes! Common decency ought to have made Mr. King ashamed to publish this letter, even if instead of *amputating* and *mutilating* it, he had given it just as it was written—but my allusions to poverty and sickness, seemed to suggest to him only how he might turn them to the best money profit.

* "Movable comb-hives, whether they contain patented features or not, when made without the closed top slot (or morticed frame), to avoid our patents, are sure to infringe on Mr. L's extended patent, and those who use such hives are required to pay dearly for another right, as his patent covers frames having a shallow chamber, or space between the frames and honey board, or even between the top bars, and our patent covers the other kind, where the top bars form a honey board with slots to admit the bees to the honey-boxes." (King's Bee-keeper's Text Book, p. 140,—ed. 1869). And yet Alfred Kelly used just this arrangement on his patent of 1837!

"Come on my confederates!" for this is the interpretation which I cannot help putting upon that "shameful garbling"—"now is the best time to trample on this troublesome old man—for he is already down, and may never rise again! Dejected, sick, poor! What more to our purpose could he admit! and what rights has he now left which we who are strong are bound to respect!"

Am I carried away by some strong delusion? Has "the prejudiced old man" forgotten what an honorable man he thus assails? He! garble my letter? He! suppress one "jot or one tittle" essential to a fair understanding of the whole matter? He! who is "so jealous of his honor," that he must needs vindicate it from the suspicion of an interpolated "the!" Is not this indeed "tithing the mint, and the anise and the cummin—while all the weightier matters of the law are omitted?" This infatuated man! whom I would fain have spared such an exposure, if justice to the dead had permitted—how much longer will he imagine that—ostrich fashion—he can hide his scheming head under the shifting sands of misrepresentations, and yet not reveal the monstrous proportions of his shameful acts?

Fellow bee-keepers—honorable men and women, knowing as you now do, some of the facts about that letter, can you blame Mr. Wagner for asserting that for a *base purpose* it was *shamefully garbled*? At first I was sorry that he alluded to it, but now I feel rather that the hand of Providence guided his pen.

Just one year ago, I was sitting at the same table with my friend, as he was writing that article, which unfolded "the false assertions and baseless claims" of Mr. H. A. King's patents, in language almost as dispassionate as the summing up of an impartial judge—and which he concluded with the following offer:

"And now to avert all misconception or misconstruction, we here offer the columns of the American Bee Journal to the extent of two pages monthly, for three months to come, to Mr. King for anything he may have to say in refutation of our remarks, or in explanation, exculpation or vindication of his course as a patentee, inventor or dealer in bee hives, or articles in connection therewith. And should Mr. King fail to avail himself of this offer, we extend it to any purchaser of territorial rights under him who may feel disposed to undertake the task."

Neither Mr. King nor any one in his interest ever dared to accept this offer—but for months he assailed the motives of Mr. Wagner and myself, neither of us making any reply—until at last in the December No., emboldened perhaps by our silence, he sought to make us suspected of crimes, which if proved, would have consigned us both to infamy, and myself to the walls of the Penitentiary. Had not the time fully come for us to vindicate our characters?

But for Samuel Wagner, and his American Bee Journal, Homer A. King imagines he might have had the same control over the bee interests of this country, that the *Tummany Ring* wielded over the finances of the city of New York—therefore, he misrepresented and slandered the man whose wide and accurate knowledge, incor-

ruptible honesty, and manly courage have so completely baffled his schemes by revealing their author in his true character to a discerning public.

The generous bee-keepers of this great continent will long delight to honor the name of Samuel Wagner, as that of the friend to whose protracted, wise and unselfish labors, they owe a debt of respect, love and gratitude, which they can never hope sufficiently to repay.

Justum et tenacem propositum virum,
Non civium ardor prava jubentium,
Non vultus instantis tyranni,
Mente quatinus solida * * *
Si fractus illabatur orbis,
Impavidum ferient ruinae.

Immutable in purpose, the Just Man must learn,
The wrong demands of heated citizens to spurn,
And ne'er from urging Tyrant's frown, dismayed to turn.—

Should earth to fragments dashed, against This
Man be hurled,
Unfearing, he'll be buried 'neath a ruined world.

L. L. LANGSTROTH.

Washington, D. C., March 1872.

[For Wagner's American Bee Journal.]

Sworn and Unsworn.

"Destroy his fits and sophistries? In vain!
The creature's at his dirty work again."

POPE.

For the amusement, if not the instruction of the readers of the Journal, we give the last King circular which has come to hand.

TO THE BEEKEEPERS OF AMERICA.

On the evening of February first, about six o'clock, Mr. R. C. Otis called at the hotel where I was stopping, and asked me whether I was engaged, stating that he wanted to talk with me. I replied that I had an engagement at half-past six, but could spend half an hour with him, and invited him to be seated. He said we had better go to his room in the hotel where he was stopping. I consented and went with him, and while on the way, and after we reached his room, he spoke of his failing health, of his poverty, and of the poor chance he had for success in our conflict, stating that I had nine chances out of ten for success. Consequently he had looked over the whole matter and concluded to see me and have a talk. He then discoursed eloquently upon my success in life, and present position and prospects, comparing my past success to that of Orange Judd, and said that if I would unite with Mr. Langstroth and obtain the re-issue of his patent, we could achieve a vast fortune, or words to that effect. I told him that there was a time when I could have accepted such a proposition honorably, when I was ignorant of the facts lately brought to light by my trip to Europe and investigations in the United States; that now I could not accept such an offer honorably, and would not if a million of money were laid at my feet. He argued that I could take such a course honorably, and buy him

out after judgment was rendered against me. I told him that even supposing such a possibility, I had a remedy for every bee-keeper in the United States, and could not without dishonor entertain the thought for a moment, prior to the rendering of such judgment, but that I had no fears of such a result with the evidence lately brought to light. He expatiated on the ability and integrity of my counsel, Hon. A. F. Perry, and said I could influence him, and with his influence and mine, an extension of Langstroth's patent could be got through Congress. If it was not for the influence which I could bring against it, if he had money enough he could procure such extension alone. When he found I would not consent, he tried another expedient, comparing my success to that of Jim Fisk. I told him I knew Mr. Wagner had influenced a few to entertain such views of me, but they were few; that I could not take the course he proposed, and could not remain to hear such comparisons; so I bid him good evening and returned to my hotel.

HOMER A. KING.

State of Pennsylvania, }
Lawrence County, } ss.:

Personally appeared before me, a Notary Public, duly commissioned, Homer A. King, above named, and being duly affirmed according to law, says the facts set forth in the above statements are correct and true.

GEO. W. MILLER,
Notary Public.

G. W. MILLER, }
Notary Seal. }
New Castle, Pa., Feb 8, 1873.

During the above interview, Mr. Otis stated that he had spoken to Mr. Langstroth over a year ago about getting his patent extended, but Mr. L. wanted the entire interest in it, hence nothing had been done. I infer from this, that Mr. L. has been again compelled to come to Mr. Otis' terms, and the latter is to have the lion's share in the second extension. Having failed to crush me, and then failing to secure my aid, they now propose to have an extension at all events. Mr. Otis says he erred, by the advice of Mr. L., in waiting for results against me before pushing others. He says the moth blocks are a good invention, and if he fails to prove my hive an infringement, it does not break the L. L. patent. I infer that he intends to secure an extension, and then push others to the wall. I do not propose to desert the beekeepers of America, nor let Otis shake off my grasp on the throat of this black mailing business. I will stand by any beekeeper whom Mr. Otis may attack (except his own stool-pigeons,) and I ask the beekeepers of America to act, not in furnishing me money, but to bring all their influence to bear on Congress to prevent the extension.

Mr. Otis, I believe, is on his way to Washington for this purpose. (Mr. L. is already there.) Let the beekeepers of every community get up petitions at once. Have every beekeeper and others interested to sign them and send them without delay to Hon. A. F. Perry, Washington, D. C. Men who own rights in the L. L. patent

are as much interested in the matter as those who do not.

H. A. KING.

SUGGESTIONS.

In your remonstrance give the following reasons, in substance; of course, adding as many more as you please. But express all as briefly as possible.

1. Langstroth's patent has been re-issued and extended, and has been a source of income to him for a period of twenty-one years.

2. Thousands have already purchased a right twice, compelled to do so by first extension; and many more have quite recently purchased; both of these classes would now be compelled to re-purchase, in the event of a second extension. This extension would be granted only for the benefit of the patentee, and as there are other hives in the market superior to his, this benefit would be obtained almost entirely at the expense of present right-owners, who have invested, and having their bees established in these hives, would have no alternative but to re-purchase, or suffer great loss by precipitately abandoning the hive.*

3. The claims of said patent are now contested in the U. S. Court. There is abundant evidence that these claims are invalid, and the patent should never have been granted.

4. Langstroth preposterously claims all that is valuable in a hive, and that all practical movable frames used in other hives are infringements on his. The attempts, successful and otherwise, to extort money from the beekeepers of America, who use other hives, have been numerous and persistent. These attempts and the violent threats of owners of territory in this patent, have done more to retard the progress of bee-culture among us, than all other causes combined.

These are merely hints; express them and all others you may add, briefly, obtain all the signers you can, and forward to your representative or senator without delay. This must be done at once, or it will be too late.

We shall make very short work of all this stuff. Nearly a year ago we personally informed Mr. King, that we would entertain no proposition for a compromise before the issue of the suit,—and that Mr. Otis was of the same opinion. We have never wavered in our determination. Mr. Otis neither has nor pretends to have any authority to use our name in connection with any compromise—nor do I believe that he has ever proposed one—nor does Mr. King's affidavit say that he has.

It seems that "a million laid at his feet," cannot now tempt a man so enlightened by foreign travel, to think of compromising with evil doers!

* Mr. King seems to leave upon everything that he writes "the trail of the serpent." Does he not know that all hives legally in use before the extensions are free from any further demands? Will those having them in use, seek to pay another patent fee for more of the same kind—when there are "superior hives" in the market? Will Congress extend a patent which the courts have pronounced illegal? But enough of this trash.

How changed from the Homer A. King of a year ago, offering to pay thousands of dollars for a license under a patent which he could prove by *foreign testimony* to be invalid!*

Now comes something which is *not* sworn to. Mr. Otis is represented as admitting substantially that if Kings' hives are pronounced by the courts to be no infringements upon the L. L. patent; that patent "still lives." "The moth blocks are a good invention," so Mr. King *infers*, that he intends to secure an extension, and push others to the wall. Strengthened by such a wise conjecture, he can see a little further into this mill-stone of nefarious plots. "Mr. L. is already in Washington, and Mr. Otis is believed to be on his way there, to secure his lion's share of the second extension."

Let us have a few *facts* to set off against so much *inference*. Neither Mr. Otis, nor any one else, will have an interest in any further extension. I have applied for no such extension, nor have I thought of doing so before the suit of Otis against King has been decided.

What a laughing stock has Mr. King made of himself in this whole matter. Scattering his blank petitions against my application—he flies to Washington on the wings of *express steam*, to oppose it in person—rushes almost breathless into the presence of the astonished officials, requesting the sight of that petition, concocted to escape the piercing vision of such a kingly eagle, and lo to his intense mortification finds a new illustration of the Huddibriastic couplet.

"That optics keen it needs I ween,
To see things that cannot be seen."

If Mr. King is confident that my claims will be so ground up in the legal hopper, that nothing but the moth blocks will come out intact, what interest has he or any one else in opposing an extension? Why should he deprive me of what may prove so harmless a plaything for my "second childhood?" Why should not the dull routine of Congressional duties be relieved by such a huge joke, as the play of Hamlet with the character of Hamlet, Ghost, Queen, King and company *all* left out? An application for the extension of a patent which after arrogating so much, has so "fallen from its high estate," as to hide itself under a moth trap! Perhaps if I had the true *regal audacity*, I might not think it impossible, even with such shallow pretences, to deceive the willing public, or force them however unwilling to enter my trap. Visions of patent moth traps would flit through my brain, and wounded as I am, would almost make me dance for joy at the thought of my *patent moth trap*—EXTENDED BY ACT OF CONGRESS—and all the bee-keepers of the land fluttering around its pernicious light, to have their silly wings singed for my special benefit!

L. L. LANGSTROTH.

* See March No. of A. B. J., p. 196. Had Mr. King contented himself with an honorable defence of his suit, instead of attempting in every way to forestall public opinion, this and other documents so damaging to him—need never have been given to the public.

[For the American Bee Journal.]

Hives at the Indianapolis Convention.

MR. EDITOR:—On page 193 of the February number, Mr. Gallup states that there were any quantity of patent hives at the National Convention at Indianapolis, that were worthless; that is, they were not calculated for the honey extractor. If this be the true interpretation of his language, I beg leave to differ with him; for I do know that he either labors under a mistake, or I do not at all understand when a hive is adapted to the use of the melextractor. Consequently all my efforts, with those of many others, in endeavoring to get a hive adapted to answer this purpose, are simply failures.

I have visited quite a number of apiaries, and consulted many beekeepers of extensive experience, and among them I had a lengthy interview with Mr. Langstroth. In the course of our conversation he stated to me that a hive containing two sets of frames, one set situated directly above the other, and of equal size, would unquestionably procure the largest yield of honey; and my own experience, together with that of all others whom I have consulted relative to this particular subject, agree that Mr. Langstroth's position is true. They also agree that a hive thus arranged is not only adapted, but better adapted, to the honey emptying machine, than any hive containing only one set of frames. For with a two-story hive, properly arranged and prudently managed, we are not troubled with brood in the upper set of frames, as the queen is confined to the breeding chamber below—which should never be resorted to for surplus honey, except in cases where the queen is about to be crowded out of space in which to deposit eggs sufficient to keep up the population of the hive. And in such cases, it is my opinion, that we should be very cautious not to uncup all the cells in any one frame, except perhaps the outside ones; for it may be, and no doubt often is the case that we rob the breeding apartment of all the early gathered honey, which is less diluted with water, than that collected later in the season. Later gathered honey is not so well calculated to winter bees on, as that which is collected during the earlier part of the season. Then, as already intimated, we should uncup and empty out only sufficient honey to afford the queen room, for laying eggs. This may be accomplished by uncapping the cells two-thirds of the way from the bottom of the combs towards the top. The upper set of frames should be of precisely the same size of the lower ones, for the very plain reason and well established fact that bees will not always work in either boxes or shallow frames, when honey is plenty in the fields; and when, consequently, there is no good reason why they should not leave the breeding apartment and go above to store honey. Under such circumstances the apiarian is not left in a helpless condition, if both the upper and the lower frames are of equal size; for in a few moments he can lift one or two frames containing brood together

with the adhering bees from below into the upper chamber. The bees will not desert their brood, but will remain by it, and immediately commence constructing comb and storing honey. Whereas, where boxes are used one or two bees will go above on an exploring expedition to day, and to-morrow a few more will go along as company; which manner of proceeding is kept up from day to day for perhaps a week. Then they sometimes go to work, provided the honey season holds out; but if it slacks up, they also slack up. But where frames are used as above described, all this delay is avoided, by at once putting our bees where circumstances demand they should be. Now, there were hives of this kind at the National Convention. The Langstroth hive and the Allen hive (known as the Home of the Honey Bee) are often made to contain both an upper and a lower set of frames of equal size. The former was there as a two-story hive; and it was intended to have it there also in the two-story form, but it was by some means or other detained on the way, and did not reach the Convention in time to be exhibited. Yet it was stated that it was often made on the two-story plan, for the purpose of adapting it to both the use of the mel extractor and to procuring the largest possible amount of surplus honey. Now I will say, in conclusion, that if Mr. Langstroth's views, together with those of many other prominent parties, are at fault, I hope Mr. Gallup will correct us, by giving us the right plan of making hives. For it is the true plan we all should seek and impart. I fully agree with Mr. Gallup that small hives are not well calculated to procure a large yield of honey. Sometimes they answer well, but fail much more often than the two-story hive.

G. BOHRER.

Alexandria, Ind., Feb. 1871.

[For the American Bee Journal.]

Mr. Grimm gets a Blowing Up!

MR. EDITOR:—We have at different times complaints from parties who have received queens from Mr. Adam Grimm. Those parties claimed that the queens received were darker colored than they expected, and consequently were not pure. Now as we do not like to be bothered with other people's troubles, we propose to give Mr. Grimm particular fits.

On the 23d of May last, we received a line from him stating that we must prepare a stock for a queen by removing the old queen, as in about ten days he was going to send us a queen. Mr. Editor, we did not know what we had ever done to him to cause him to send us a queen; but it is said we always like to be on the contrary side, so we did not do as he ordered, for we did not like to have one of our swarms queenless so long. On the 30th of May the queen arrived. We then deprived a strong hybrid stock of all their comb and brood, and killed their queen by crushing her and threw her in among her subjects; having no comb or brood and nothing but a dead queen, they were

soon as sorry a set of bees as you ever saw; we then sprinkled them with sweet water until they were completely gorged, dipped the Grimm queen in honey and tumbled her in head over heels; as the bees were gathering honey rapidly we allowed them to build comb, and they filled up their hive with a rush. We kept out cells of brood from time to time to raise queens from, and we also at different times used the extractor on the hive; yet on the 15th of July out came that confounded Grimm queen with a swarm. She was not one of your fancy light straw colored queens, but to all appearance as pure as any imported queen I ever saw. Her workers are all three-striped, not near as light colored as some of my males, and the objection that I have to them is that they are such confounded workers that there is no getting along with them. The queen breeds about as fast as five of some of those eastern bred, extra light colored ones do; so Mr. Editor, we don't like those fellows a particle for finding fault with him. If he sent them such queens as he did us, we would advise them never to send to him for queens again. But if any one should want just as good a queen as they can get direct from Italy, they might try Mr. Grimm. We bred from that queen in preference to any we had in our yard, yet I suppose if Mr. Benjamin had her he would lose considerable sleep for fear she would lay herself to death.

The queens Mr. J. W. Lindley speaks of were mostly reared from one Grimm queen (see January No.). Now Mr. Editor, don't for a moment suppose that Mr. Grimm sent that queen to us for the sake of bribing us to give him a puff; no, not by any means; but we write this article at the particular request of one of those complainants who wishes us to give Mr. Grimm *Hail Col. mbia* through the A. B. Journal. Now, Mr. Grimm, why in the name of common sense don't you raise some of those extra light colored and harmless bees, so as to suit such customers. You can do it easy enough by crossing some of your queens with black drones, and then breed back to the Italians, always selecting the lightest colored ones to breed from. You would soon have them as harmless as flies, and they would gather about as much honey as some flies, and they would just suit some of your customers.

P. S. If this blowing up don't suit you, do your own blowing up hereafter.

E. GALLUP.

[For the American Bee Journal.]

Queens.

My limited experience indicates that artificial queens, or those sent with a few bees are poor property to make honey with. One sent by Mr. Quinby in 1867, and one sent by Mr. Grimm in 1870 were both superseded at one year old, and neither of them ever led a swarm, while a queen that came in a full hive in the spring of 1868, from Mr. Quinby swarmed each year, and on the 11th of June, 1870, when three years old, led the earliest swarm ever seen in this cold

island. They showed signs of swarming on the 8th of June: two rainy days intervened, and on the 11th, with a little sunshine and cool north-wind, the old queen led out a swarm, or was led out by the swarm, and was lost, the swarm returning, after scattering around on fences and bushes awhile; in nine days, June 20th, a daughter led out a swarm, and next day, 21st, another swarm, both between 8 and 9 A. M. I cut out queen cells to prevent a third swarm next day, as they kept on piping after I had removed the old stocks to a new place, and given one comb to second swarm on old stand. These three gave me 173 pounds of honey, while a yearling queen with one swarm gave 100 pounds extracted honey in 1870, making 73 pounds, or at least \$24 in one season, in favor of the three year old queen over her own daughters one year old.

The old queen by the middle of May had 26,000, the yearling 15,000 cells of brood; both had been fed. The first week in June, 1870, the yearling had 31,000, and the three year old 39,000 cells of brood, 8,000 ahead; so much for age. The nuclei queens never gave me a swarm, or a box full of honey. I believe the one from Mr. Quinby did give me two boxes part full, in 1866, of basswood honey, while the queen that came in full hive gave me one swarm and five boxes of honey, forty pounds.

A queen raised by me in 1869 in a nucleus from a cell capped over in a swarming-hive, sent in a small box, one was introduced in my brother's apiary in Illinois. In 1870 his son wrote me, "that hive swarmed twice, besides making an unusual amount of box honey. Now the secret of long lived natural queens appeared plain, but in 1871 he wrote me that 'the hive swarmed and the first swarm made 3 or 4 caps and swarmed, but I think that queen was superseded in the spring as the hive run into black bees;' so I conclude that queens which have been boxed and caged do not stand on an equal chance of long life with those never deprived of liberty. I have a queen now in her third year, introduced in 1869, in place of a daughter of a nucleus queen by taking a capped cell from a swarming hive and fastening it with a pin to a central comb, after leaving them queenless one night.

H. D. MINER.

Wash. Hurbor, Wis., Jan. 23, 1872.

[From the London Journal of Horticulture.]

Are Artificial Queens inferior to Natural Queens?

Mr. J. M. PRICE, writing in the American "Bee Journal," asserts that he has proved, beyond doubt, that queens raised artificially are worthless in comparison with those raised naturally. From my own experience I am led to differ from him most decidedly. Out of twenty-five stocks, the largest number of colonies I ever possessed at one time, I had not a single queen that was not either artificially raised in a small nucleus box, or was not the descendant of one

who was so raised, but I could never discover that my queens were deficient in breeding powers, or, barring accidents, in longevity. In fact, the fecundity of some of these was frequently a subject of surprise and remark; one queen, in particular, seems to stand pre-eminent in these respects.

Soon after the first introduction of Ligurian queens into this country, my own doubts venture having proved unpropitious, my friend, the late Mr. Woodbury, gave me a royal cell, which he cut out of a small nucleus box, from brood of his best yellow queen. This cell I inserted in a brood comb in a nucleus box, with a few adult bees. In a few days she was hatched out, and I was struck with her size and beautiful color. Soon after she had commenced breeding, I transferred them into an eight frame Langstroth box, and gave the bees another sealed brood comb. The stock was not particularly strong at the close of the autumn, and barely managed to hold its own through the winter; but by the end of April it had become so populous as to present the appearance of being ready even then to send off a swarm. A large super was given to the bees, into which they at once ascended, and were so crowded as to make it seem almost impossible for them to work at comb-building. In about three weeks from that time, considerable progress having been made in that respect, and the bees again crowding outside the entrance, a second super was slipped in between the first and the honey-board of the stock-box, which also became at once crammed with bees. Early in July, I removed the doubled super, containing 54 lbs. of honey comb.

The following year this stock also distinguished itself in spring and early summer by the possession of a teeming population, and gave a splendid glass box super of 75 lbs. weight. The next season seemed equally propitious; a super of 50 lbs. was taken, and an immense swarm thrown off, which also, the same summer, gave me a super of 26 lbs. weight. The following spring I examined the queen which had come off with this swarm, and was convinced, in my own mind, from her peculiar markings and appearance, that she was the same queen which had been raised in the nucleus box. That season this swarm became excessively crowded, and I put on a larger super than I ever used before, and it contained, when full, the large quantity of 86 lbs. of the finest possible honey-comb.

The following spring the old queen showed symptoms of having become almost worn out, and was, I believe, soon afterwards superseded by the bees, as I discovered a queen of a very different character at my next inspection of the interior. At the time of the old queen's death, she must have been at least four years and a half of age.

I mention but this one instance out of many which have come before my notice, but it is quite sufficient, in my mind, to establish the truth of the assertion, that artificial queens may and do prove equal in every respect to the best of those raised by the bees for the purposes of natural swarming.

S. BEVAN FOX.

[For the American Bee Journal.]

Side-Box Hive Wanted.

MR. EDITOR :—The summer of 1871 was very poor in this section for honey; the months of June and July were too wet; in fact we could not get more than one or two good days out of a week to gather honey. The blossoms do not seem to yield much honey after a day or two of rain; either the water washes the honey all out of the blossoms, or the cool nights after a rain are not favorable for the secretion of honey; at all events the bees were very cross for a day or two after a storm, then they would seem to enjoy it better for a day; then another rain, and so it kept repeating during the months of June and July.

The consequence of this was, the bees were confined to the hive so much and had so little comb occupied with honey, that they produced an immense amount of brood and bees; so that we were obliged to increase more than we intended and more than we should have done had the honey yielded more steadily.

August and September were so dry and cool that bees gathered no surplus from the buck-wheat blossoms, although stocks that were nearly destitute gathered enough to winter on in the cellar. Considering the season we were satisfied with the result; we increased twelve stocks to twenty and took 455 pounds box honey and a little over 100 pounds machine honey. The box honey was nearly all taken from nine old stocks, as we broke up one stock in May for queen cells and nuclei, and one old queen failed in June (an artificial queen according to Price), and one stock we had in an experimental side-box arrangement (since abandoned), from which we took but little surplus. The machine honey was taken mostly from the nuclei and young stocks.

Now, Mr. Editor, we would like to inquire through the medium of your valuable paper (which we consider to be the exponent of intelligent beekeeping in this country), what is the latest plan to arrange a hive for side-boxes? We have seen considerable said in the Journals lately about side-box hives, but mostly by patent hive men, or those interested in the sale of hives, and we do not always place implicit reliance on the statements of these gentlemen.

We judge, from what we have seen of it that Mr. Alley's is a good hive, but it is most too expensive and is not as easily handled as we could wish. We believe there are those who have had experience with side-box hives, who could give the desired information, if they chose to let their light shine. We do not like to say we will give a dollar a piece for description, lest we should get more descriptions than we have dollars, but would be willing to give 25 cents each for a limited number, say twenty five or so, by as many different individuals, if they will send the descriptions to the editor for publication. What we want is something that can be worked on the non-swarmer or nucleus system of management (for a concise of said system see page 20, present volume A. B. J.). Having practiced

that plan successfully the past two seasons, we are satisfied that there is no other system of management where boxes are used that can be as successful in this section for obtaining surplus. The frames should be easily handled, and should be arranged for side boxes exclusively, and we would prefer that it should be worked under the Langstroth patent, believing as we do, that the Langstroth patent covers all the desirable points in the movable frames.

Thinking there is such a hive in existence, and having failed in our own side-box experimental hive, after three years' trial, not through any fault in the principle, however, but probably on account of an improper arrangement of the hive, we are prompted to make this inquiry, as we believe that a side-box hive, properly arranged, would require less reduction by taking away brood, to prevent swarming; because it would give more ready access to the boxes than a top-storing hive, and consequently would employ more bees and give more surplus. We do not care anything about their ability to winter on their summer stands, as we prefer to winter our bees in the cellar. We know that there are many who are interested in this subject and we would those who have had success and have tested a side-box hive, to send a brief description to the Journal. J. P. MOORE.

Binghamton, N. Y., Feb. 8, 1872.

[For the American Bee Journal.]

Basswood beats the World, for producing Honey.
THAT IS SIMPLY GALLUP'S OPINION.

Mr. Hosmer's statement of the immense yield of basswood honey, made at the Cleveland Convention, calls out considerable private correspondence on the subject; as also does Gallup's paper read at the Iowa Beekeepers' Convention. I understand from one of our townsmen who was there, that Mr. Furman stated he did not believe such statements—that they were false, &c.; for the greatest yield he ever had from a single swarm in one day, was only fifteen (15) pounds. The reader will understand that Mr. Hosmer stated that one stock gathered fifty-three (53) pounds in one day. I know that I took out five gallons at about four o'clock in the afternoon from my large hive; and at the same hour on the following day the same combs were again completely filled with honey, fully equal to sixty (60) pounds. But I had then no vessels to put it in, therefore did not take it out till the following day.

On one Sunday morning during this immense yield, I noticed my bees coming in loaded and all smeared over with what appeared to be honey, and I supposed that a wild swarm *anywhere* had either metted down its combs, or their tree had fallen and smashed the honey. But on repairing to the basswood (the nearest clump of trees is within a few rods of our apiary), I found them swarming with bees, and every cluster of blossoms was completely covered with nectar, not only inside but outside also. The bees and other insects, in crawling over them, had completely smeared the whole blossom. Take a

cluster of basswood blossoms, dip them in liquid honey, hang them up to drip, and you will have an idea of the state of things as I found it; and every basswood tree I visited, both great and small, was in the same condition. I called the attention of some thirty witnesses to this state of facts; and this condition of the blossoms continued about eight days. Here we have thousands of acres containing more or less basswood trees, and have two varieties of them—one variety blossoming some ten days later than the other, thus prolonging the season for basswood honey. The weather was hot and moist at the time, and the air full of electricity, with heavy thunder showers both north and south of us; and slight showers here, accompanied by heavy thunder, twice during the eight days (at night). The reader will understand that basswood blossoms being pendant, a slight shower does not wash out the nectar. We have repeatedly seen bees at work on basswood and red raspberry blossoms, when it was raining quite smartly. During this immense yield, the whole atmosphere for miles was impregnated with the scent of basswood honey.

I have seen this same state of things for two or three days in succession; at different times, while living in Lower Canada.

Another matter, which the reader should understand is, that drouth does not effect large trees, deep rooted, in the same manner that it does small plants.

Now I wish to ask the question how many colonies of bees it will take to overstock our basswood orchard, at such a time as the above? I am with our editor about this overstocking. We have a neighbor just one mile from us, who had some ten stocks of bees; and less than one hundred (100) pounds would cover his entire crop of surplus. He was **OVERSTOCKED over-the-left!**

E. GALLUP.

Orchard, Iowa,

THE HONEY-BEE GLEANING AFTER THE ORIOLE.—Two little girls, the elder scarcely six years of age, were picking the flowers of the Buffalo or Missouri currant (*ribes aureum*), "to get the honey." They saw honey-bees around the bushes. They observed that many of the flowers had one or two little holes at the base of the calyx tube, and that such flowers were not as sweet as the others. They said the bees had torn them open with their jaws, and sucked out the honey.

For two seasons I have examined large numbers of these flowers in different parts of the village, and found many of them had been torn open. Several times I have seen the Baltimore Oriole rapidly going over the bushes, giving each fresh flower a prick with the tip of his beak. No other birds have been seen doing this; nor have I been able to see a honey-bee attempt to make a hole at the side of a flower. The calyx tube is too long for the honey-bee, so she contents herself with gleaning after the Oriole, selecting the injured flowers, and leaving the fresh ones for birds and humble bees.—W. J. BEAL, Union Springs, N. Y., in the **AMERICAN NATURALIST**.

[For the American Bee Journal.]

"Cross Bred Bees."—A Reply.

MR. EDITOR:—I find on page 149 of vol. 7, American Bee Journal, an article under the above heading which the writer manifestly intends as a criticism on my article in October No., on "The Coming Bee."

I thank Mr. Mahin for what he has said; what we want in bee matters is facts, or as Goethe has expressed it: "Light, more Light," and in order to receive more light, we must like all lesser, orbs, borrow from more favored ones, that which we lack within ourselves.

So if Mr. Mahin or any other one can illuminate my understanding upon this matter of cross bred bees, I shall be very glad to learn wherein my error lays; for I wish to deal only in facts, and impressions drawn from facts. I shall not stop to question Mr. Mahin's capacity for correct conclusions on the matter upon which he speaks so very positively; for a man, to say the least, when he is so certain somebody else is wrong.

As Mr. Mahin has expressed great "curiosity, to know how we have ascertained that his "*mongrel race*" are greatly superior to the pure Italians in their range of flight and acuteness of scent, "I will say in answer, that I own a farm on the prairie $2\frac{1}{2}$ miles directly east of my apiary. The east side of the farm is upward of three miles from my bees. For the past two seasons, since my attention has been directed to cross bred bees, during the blossoming of the Golden Rod, I have taken special pains to note the distance travelled by my bees, to work upon it, and in every instance, have found the *cross bred bees further from home, than any others*. On one occasion I took the trouble to count the bees passed on my way in from the east side of the farm; and on the first quarter of a mile I counted five *cross bred bees* and no *Italians*. After the first quarter of a mile was passed, the *Italians* began to increase; and at the house, two and a half miles away, they were quite numerous. Possibly you might conclude that I keep more of the *mongrel race* than *Italians*, but not so; my *Italians* outnumber them five to one. In regard to their acuteness of scent, I will say that during the past season my attention has been particularly called to it, from the annoyance they frequently gave me, whilst opening hives and handling honey. Whenever the forage failed from any cause, they were sure to be first to show it, by presenting themselves wherever there was the least exposure of honey, in doors or out; even entering a dark cellar to obtain it; and besides they have yielded me, the past two seasons nearly double the honey that any of my pure *Italians* have.

Mr. Mahin again says. "I have several colonies now, a majority of which are somewhat less than *half Italians*. They have received pure *Italians* queens this fall, and within a few days the pure *Italian* in those hives, have been bringing in loads of pollen, procured somewhere, I know not where nor from what, while only now and then does one of the *mongrels* bring in anything and yet the latter outnumber the

former *perhaps five to one*. This fact, ascertained by careful observation, would seem to place pure Italians ahead in acuteness of scent or range of flight, or in something equally important."

Well done, Mr. Careful Observer; this is certainly a settler; and will doubtless give a quietus to all mongrel pretensions. A force of young frisky Italians, have beaten a whole host of old worn out mongrels—the youngest of which, must have nearly reached the "three score and ten" limit of bee existence. Wonderful! Wonderful discovery!!!

Look again Mr. Mahin and as you look *try* and think a *little*. If proof was wanting in all other respects, the history of the Italian bee, would of itself demonstrate it, as a mongrel breed. From the earliest accounts of it, dating back to the days of the Roman Empire, it was certainly exposed to crosses with the black bee. For not only have we accounts of the two breeds existing together in Italy both now and in the past, but to say that the Alps present an absolute impassable barrier to the flight of the honey bee, is an assertion which possibilities do not warrant. When it is known that General Fremont captured a humble bee on the top of one of the loftiest peaks of the Rocky Mountains, is it too much to say that the honey bee, so recklessly persistent in its course when swarming, might at times cross the less elevated portions of the Alpine range.

I do not say that this Alpine or trans-alpine migration of bees, has really transpired; but I do say that I believe such a thing to be possible even to the crossing of the glaciers. I know from personal experience, that neither the Rocky Mountains or Sierra Nevadas, present any obstacle whatever to the passage of the honey bee. Besides Mr. Grimm if I am not mistaken, reports that in the neighborhood where he procured his queens, in Italy, he saw bees, so very dark, that at first he took them to be genuine black bees, but found upon closer inspection they were old Italians. Now does any one suppose, that so proficient a bee-master as Mr. Grimm would mistake an old Italian bee for a common black bee, unless there was such a blending of breeds as to render it uncertain where the dividing line really was? But a very short while ago the test of purity for Italians was "three bright straw colored bands, and the more docile the purer the breed." Now, however, the thing is entirely reversed; the darker the bands the purer the bees and besides, they are allowed now to sting if they want to, without being discarded as impure. What then are the inferences to be drawn from such facts? Simply that the further we breed away from the black bee, after a certain intermixture has been reached; the poorer the breed becomes.

I have not said that the "Coming Bee" is to be produced in "few generations" or ten generations, but I do say that I believe that when we can control fertilization successfully, we can produce by crosses a better honey bee, than we are at present possessed of; and thus do away with the necessity of going to Italy every year to keep our stock good.

A few words with you Mr. Editor, and I will

close. You say in your editorial comments upon Mr. Hewitt's article on the removal of eggs to and from queen cells, "the facts stated have not as yet been remarked before by any observer."—I wish to call your attention to Richard Colvin's excellent essay on the "Italian Honey Bee," published in the Agricultural Report for 1863, page 539. In the article referred to, Mr. Colvin says in reference to queen raising:—"The combs containing eggs should hang between two others containing a sufficiency of honey and pollen to supply their wants. These combs however should contain no eggs, or grub, young enough to be convertible into queens, otherwise the bees may select their native or impure eggs or grub for queens; and raise the pure Italians as workers only. This is the more important from the fact, that they sometimes transfer eggs, or grub from one cell to another, or from a worker to a queen cell."

Thus wrote Mr. Colvin ten years ago; so Mr. Hewitt's discovery is "no new thing under the sun."

G. A. WRIGHT.

Orchard, Iowa, January 10, 1872.

[For the American Bee Journal.]

My experience with Hybrid Queens.

MR. EDITOR:—I read an article in your invaluable Bee Journal of October, page 77, on "The Coming Bee."

Having had some experience in rearing hybrid queens is my only excuse for troubling you with this communication, and hoping some person may profit by my mistakes.

About the 19th of June, 1870, I received per express, from Mrs. E. S. Tupper, of Brighton, Washington county, Iowa, two Italian queens. I made swarms and successfully introduced them. Wishing to get all my bees Italianized, and having perfect confidence in their purity as Mrs. Tupper had informed me by letter, "I send out none but tested queens reared in full colonies." In about twelve days I unqueened two colonies of black bees and exchanged their combs with my Italian stands, giving the combs that contained the supposed pure Italian eggs to the black queenless colony to raise queens.

In about ten days I unqueened the remainder of my black colonies, and gave them capped queen cells. All went along well, until the young queens hatched, when I noticed they were smaller and much darker than their mothers; not having had experience, I supposed they would get lighter as they got older. In this I was disappointed.

The worker progeny of the supposed pure Italian queens proved them to be hybrids. The worker progeny of the young queens gave but few marks of any Italian blood.

In September, 1870, I purchased one Italian queen of the Rev. L. L. Langstroth, of Oxford, Ohio, and one of T. V. Brooks, Esq., of Lexington, McLean county, Illinois. Both produced as fine worker progeny as any one could desire.

Late in the fall I purchased several stands of

black bees in box hives. Last spring I had pure Italians, black bees, and a variety of hybrids.

I soon found my hybrids cross, but the hybrids raised from hybrids and impregnated by black drones, possessed all the bad qualities of both parentage and but few of the good, as they were less prolific, and did not gather as much honey as the old discarded black honey bee, while the pure Italian queens were most prolific and gave much the largest yield of surplus honey. I must say I could not make any distinction in the honey product of the half-bloods, as they were as prolific and gave as much surplus honey as the pure Italians.

I had six miserably cross and unproductive stands of my raising breeding downward, which in my opinion gave me a good opportunity to test the doctrine as to the superiority or inferiority of "the coming bee."

Any one keeping hybrids and crossing them with the black honey bee, in my humble opinion will find himself the possessor of a miserable substitute for the good old black honey bee, or their superiors in every particular, the Italian.

I commenced last spring with twenty-nine stands, many weak, mostly in old-fashioned boxes—transferred them to the Langstroth hive. I used the Gray & Winder honey extractor, which is superior in every particular over any I have had the pleasure to examine; took fifteen hundred of what is called slung honey and increased my colonies to fifty-three. I Italianized my apiary, discarding hybrids.

GEO. L. LUCAS.

Peoria, Ill.

[For the American Bee Journal.]

Removal of Stocks in Summer.

The majority of beekeepers suppose that bees cannot be removed, in summer time, for short distances, without losing the greater part of the old workers, by their returning when loaded to their old stand, though circumstances sometimes make such removal desirable. In such cases it may be useful to the inexperienced to know how I have managed matters, as I have at various times removed stocks from ten to eighty rods with perfect success.

I removed three colonies last June, for one of my neighbors, about eighty rods, in the following manner:—doing it in the middle of the day, when the bees were mostly out in the fields at work quite busily. The first performance is to smoke them sufficiently to stop any more bees from leaving the hive, and then keep doing so, or rapping on the hive for about thirty minutes, at short intervals. Then, if in a box hive, drum out all the bees you can get out, together with the queen into a box; or, if in a movable comb hive (as those on which I operated were) drum and brush out all the bees into a box. Now carry the bees to where you want to place them, also the hive, comb and brood, and re-live the bees by emptying them down on a board or cloth in front of the hive, letting them run in, and the thing is done.

In removing the three swarms eighty rods, as above, not more than a dozen bees returned to the old stands, and those were probably out to work and had not returned when the hives were removed. But suppose we had removed them in the usual manner, by fastening up the hive and removing them at night. Nearly all the old workers would have returned to the old stands the next morning, and have been lost to the stocks. I have seen stocks entirely ruined by removing them short distances at night, in the last manner.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

The Season in Iowa.

MR. EDITOR:—I commenced last spring with 132 colonies. They commenced swarming the 30th of May; I had 98 prime swarms by the 5th of July. Returned 26, had 204 colonies the first day of October; united the nuclei with the weakest, and put them into winter quarters November 28th. With the extractor, I took from 42 colonies 8½ barrels of honey, averaging 73 lbs. per colony. Of box honey and combs in small frames, I took nearly 2,000 lbs., very nearly 20 lbs. average for the rest of my colonies. I sold my strained honey in Burely for 18½ cents; in jars, for 20 cents. Box honey from 20 to 22 cents per lb. All this honey was made and taken away before the 20th of July, and is of course number one. This season did not come up to the last with me, but will still leave something for this summer's work. The honey is now nearly all sold. I had to feed some of the late swarms, as the season hereabouts was cut short the latter part of July by the drouth.

By the way, I have made a bee feeder, which is cheap and is O. K., without a patent. Take one or two round oyster cans, empty of course; take off the top and bottom by holding them over hot coals. The end which is not injured I use for a cover. A tin band is put over the outside to hold on the muslin, the same as a strainer; the band to be one or one and a half inches wide, hemmed on one side. A thinner will make them from two to three cents apiece. This feeder I place over a hole in the honey-board, where the bees are clustered. There will be a half-inch space between the honey-board and the muslin, the band projecting that far below the muslin. It works well. I believe in feeding bees early in spring to stimulate them to breeding. I double up my colonies if weak in April, it will pay best for increase or for yield of honey. I do not practice artificial swarming—natural suits me best. Where honey is the object, never let a hive swarm but once, and often put back the first swarm, if not an extra one; but where increase of colonies is required, artificial swarming will do the business. I take all queens' cells from colonies which have swarmed naturally for queen raising, and choose from those who are the best workers and are of color. My half-breeds have, on an average, yielded the most surplus honey in boxes. With the extractor I

and no difference, and therefore prefer the more practicable ones for that purpose, and use the double story Langstroth hive, with no honey-board. Still I would not condemn any movable comb hive, when they have no extra moth traps, and the frames are of course movable.

P. LATNER.

Latner's, Dubuque Co., January 19, 1872.

[For the American Bee Journal.]

On Pure Italian Bees.

MR. EDITOR:—On page 149 of the January issue for 1872, Mr. R. M. Argo, asks the following question: Can a pure Italian queen whose progeny for the first few weeks all show three yellow bands distinct afterwards produce workers half black bees. In reply, I would say no, provided the queen be pure, and is fertilized by a pure Italian drone. I have had several such cases as he mentioned in the article referred to, and I have also had queens whose workers during the first three months showed them to be but little if any better in color than such as are commonly termed hybrids; after which they assumed a color almost if not quite equal to the finest specimens of Italians.

I do not in such cases claim that the queen and drone are both pure Italians, as such a state of affairs will never be witnessed except one of the parents be bastardized.

If a pure Italian queen be fertilized by a pure black drone, the worker and queen progeny will both afford unmistakable evidence of impurity from the beginning.

And this state of affairs will continue to exist as long as the queen lives and remains fertile, with little if any perceptible difference in color during the time. Such at any rate is what my experience has led me to conclude upon. But if we have bees that are ever so slightly dashed with blood differing from themselves in variety, we may look for and confidently expect just such occurrences as Mr. Argo has described.

And from what I can learn I am well convinced that he is not the only person who meets with such cases, as they are of frequent occurrence but are seldom reported. To report these occurrences it is too much the custom to think it would injure the sale of Italian bees and queens; when the facts in the case are that eventually all will be forced to occupy the position either that we do not succeed in having perfectly pure bees imported to this country or that they are not an original and distinct variety of bee. The latter position I am disposed to favor, as I have made it a part of my business to search after pure bees, and have found Mr. L. L. Langstroth, Mr. J. T. Langstroth, Mr. A. Gray, and Mr. A. Benedict, in company with myself, to occupy the same position, and time will bring all to the same standpoint, except it be, that we do not, as already stated, have pure bees shipped from Italy. But if it turn out (as I believe it will) that the Italians are not distinct in variety, then the sooner we speak out plainly upon this subject the better. For I am

confident that we can by careful breeding improve our Italian bees until any dash of foreign blood that may exist among them will only occasionally make itself manifest. Our Chester white hogs are not an original variety. Neither are our Durham cattle original, yet careful breeding has brought them to such a degree of perfection that time will declare them distinct as they already very nearly duplicate themselves in every instance. Our Italian bees do not as yet maintain this degree of purity except in perhaps a very few cases where parties have selected their finest specimens to breed from and have been exceedingly careful as to what kind of stock they introduce into their apiaries. I will state further in regard to our Italian queens, that I do not regard them as being fully tested, until I have seen a number of their queen offspring; when if they are fair duplicates of their mothers I regard them as being good queens to breed from. All queens who will thus duplicate themselves will show uniformly three banded workers. But a queen whose workers may all appear to be in possession of three bands may lack a few in perhaps twenty thousand workers, and an ordinary inspection will not detect their presence among several thousand three banded bees, hence the difficulty in depending upon this method of testing Italian queens. And the farther the mother queen is from distinctness in variety the more frequently will the error in depending upon three banded test manifest itself.

A dash of impurity does not always manifest its presence, but remains sometimes in a latent state through several generations, and then shows itself to both the surprise and disappointment of the breeder. This fact seems to have been lost sight of by many of our queen raisers. If not, they have been too credulous and have too long regarded the Italians as an original distinct and consequently pure variety of bees. Or it is possible that they overlooked both of these facts; I say facts, because I feel thoroughly convinced that we have no perfectly distinct and pure Italians in this country. Then I would say, let us send competent persons to Italy in search of pure bees if they are to be found. And if procured let us breed them in apiaries entirely isolated and beyond the reach of black bees. And if pure bees cannot be found let us improve such as we have until they become so nearly distinct as to be depended upon. Then and not till then will we see the Dzierzon theory thoroughly tested in practice, and also the fact fully proving the fertilization of the Italian queen by a black drone will not render her drone progeny impure.

G. BOHRER.

Alexandria, Ind., January 25, 1872.

[For the American Bee Journal.]

Italian Bees at the Cleveland Convention.

While for years various parties in the United States have been raising and selling Italian Queens on their supposed superiority over the common variety, nothing very definite as to

their honey gathering qualities has found its way into the journals.

Interested parties have, it is true, sent out large statements and in many instances, claimed that they would gather double the honey from red clover, &c. While this was going forward, various honey raisers were trying the merits of Italian bees as honey producers, but as they had converted all their old stocks into Italians, no comparison could be made or opinion formed as to their comparative merits. Those having them obtained large amounts of honey by their skilful management and modestly gave their Italian bees credit for it. This was very natural, but, as it was the skill of the apiarian and not the *Superior Bee*, which gave the results, their reports gave an erroneous impression, and the traffic went on.

Some tried them and gave them up, as they did not provide enough more honey for the extra trouble, and many went so far as to say they would not work in the boxes nearly as well as the old kind. But I am straying from my subject and must return to the convention for my statistics. At the convention, it may be well to say, each member was handed a printed blank on which to carry out the number of bees he had, the number of movable frame hives in use, the amount of honey produced and the price obtained, and the number of Italian stocks.

Men from all parts of the country gave in their reports. No class failed to do this except Italian queen vendors and a few others tooting the Italian horn. None of these "advice to beginner's" men report a pound of honey—a very curious fact.

The honey-raisers' report embraces a few having some Italians and some blacks, and, as I have no means of knowing when they were Italianized I have left out the mixed apiarians entirely, and give only those reports which have no doubt as to which kind of bees stored the honey. Of these seventeen hundred and thirty-one Italian stocks, produced twenty-nine thousand and forty-seven pounds of honey, or an average of about sixteen and three-fourths pounds per hive.

As the old kind were in box hives many of them, and of course not in the hands of the most skilled apiarians—while the Italians were in movable comb-hives, and managed by the very men who can give "advice to beginners," I think the old *fogie brown bees* have done well.

Now, Mr. Editor, as the increase of Italian stocks reported does not differ essentially from the increase of the blacks reported (nearly doubling), we have what the weather report of the Smithsonian Institute bases its opinion on, as also the Life and Fire Insurance Companies, and all other good business men, that is, we have the average yield over a wide extent of territory, managed in a variety of ways with a wonderfully uniform result. It is encouraging to those about to purchase a yearling Balmoral queen with the prospect of raising from year to year a large number of pure queens to take the place of those having a doubtful pedigree.

When we realize that perhaps queen breeders, who as a rule are or have been patent Bee Hive

Vendors, may tell the truth when they say there is no profit in rearing tested queens at two dollars cash, it certainly seems no trifling matter and requiring no small amount of courage to embark in an enterprise promising sixteen pounds less honey for every Italian stock wintered, with all the attendant trouble, than they would have had, had they saved their *money* and their *plain beautiful* bees.

We are not entirely dependent on this average yield for the evidence that black bees are vastly superior to Italians. The greatest average yield in any apiary last season was that of Mr. Hosmen, which was black bees. Mr. Quinby, who by the way is a large raiser of Italian bees, also reports his greatest yield of honey from one hive to have been secured from black stock. Mr. Gallup, who has realized Novice's prophecy, of "five hundred" pounds per hive I presume obtained it from his *New Hives* merely, and like Mr. Hazen, will not fail to give it to us in different re-hashes for the next five years.

With the best wishes for the Journal and beekeepers, I remain, &c., T. F. BINGHAM.
Allegan, Mich.

[From the N. Y. Sun.]

A Big Frog Story.

HOW AN OLD GENTLEMAN'S BEE BOXES WERE ROBBED OF THEIR HONEY—AND HOW AN OLD THIEF GOT RID OF HIS PURSUERS—A STORY FROM A VENERABLE CLERGYMAN.

To the Editor of *The Sun*.

SIR:—I read your Staten Island frog story the other day with great interest. I have met with several very singular facts in connection with these amphibious animals in the course of my travels, one of which I will here record. In Jamaica, West Indies, the settlers keep their bees—whose honey, by the way, rivals the famous product of Mount Hybla—in old salt fish boxes. The box is first well soaked in a mountain stream, and then daubed inside with honey. When the bees swarm, the hive is placed handy, and they very soon accept the invitation to new quarters. The box is then placed upon four stones, which elevate it about half a foot from the ground, thus giving the bees air and a way of getting in and out.

An old friend of mine had his house and garden near a small stream, which was the resort of a number of frogs. Some of these fellows were eight inches long and four broad. They would come up to the house every evening, and loaf about watching the children at play. When darkness came on, they were supposed to go to their barracks for the night. The old gentleman had a number of bee boxes. He was fond of honey. He liked honey and he liked mead. When the time came one season to take the honey, he was greatly surprised to find that several of his boxes were almost empty. I was passing the next day and he called me in and told me his trouble. He showed me the boxes.

"Thieves have been at work there," said he.

I agreed with him. He proposed that I should

call on my way home in the evening, and that both of us should sit up and watch. This I acceded to.

The night was calm and beautiful. The full moon seemed to float in a sea of silver. We put out the lights, closed the door, and seated ourselves on the piazza behind, where we could smoke our pipes and converse in an undertone without being observed. All was still around the house. The ripple of the stream, a hundred yards away, was all that could be heard. We had sat thus for about two hours, and had almost come to the conclusion to go to our beds, when my attention was attracted by a dark object about the size of a boy's cap, moving in jerky leaps from the side of the house toward the bee boxes.

"Wallace," I whispered, "what is that?"

Wallace careened over and watched the object earnestly.

"It's a frog," said he at last; "no animal of that size but a frog could take such strides."

In the meantime the frog (for we had agreed it was one) had reached the shade of the tree under which the bee boxes stood. We resolved to watch the midnight promenader. We left the house by the front door, walked round through the bushes, and ensconced ourselves in a shady spot where we had full view of the boxes. Our frog had vanished. Hearing a noise like the cracking of dried leaves, we looked toward the house and saw another frog, as we concluded from its gait, moving from the same side whence the first had come, and following the same direction. While we were gazing on this new prowler, we heard the bees in a box within six feet of us begin to buzz as if in consternation. Presently a stream of them flowed from under the box and spread around. Almost at the same moment we saw a dark object emerge from the box and commence a series of very deliberate hops toward the stream. We stealthily approached, still under shade, however, and discovered a frog, which we no doubt rightly surmised was our first friend, literally covered with bees. Covered is not the word. The bees were piled upon him, and clinging in layers to his sides. A large number also flew around him, and furnished music to the procession.

I turned round to see what had become of our second visitor. There he was moving with joyous leaps toward the bee boxes, followed by at least twenty other frogs. One after another these leaping bandits vanished under the box from which our first friend had just come, with the whole family of bees on his back and sides and about his ears.

We were too much astonished and interested to speak. We slowly followed our frog with his load of bees. He made straight for the river, but at a very slow pace. He carried weight and could not move fast. When he got to the water he plunged right in. That was his way of putting down his passengers.

We then returned to the bee box. Our footsteps amid the dry brushwood must have startled the burglars, for when we reached the tree they were going at full speed for the stream. Next morning we examined the box, and found that

nearly all the honey had been stolen. The cells were broken, and the honey was plastered round in every direction. While the decoy had carried off the family to a watering place, their mansion had been thoroughly despoiled by his confederates.

W. A. M.

Correspondence.

My apiary last spring consisted of sixteen colonies. My surplus honey from this apiary the past season amounted to nineteen hundred and eighty-six pounds. Seven hundred and sixty-eight pounds of the above was extracted. Nineteenths of it all was basswood honey. Increase, four new swarms. I use the Langstroth hive. Like some others, have used it in an *improved* style and form, but do not now; cannot bear the improvements any longer. Now use the old form and style.

JAMES HEDDON.

Dowagiac, Mich., Feb. 26, 1872.

Enclosed please find two dollars for current volume of the Journal. You may as well consider me a life subscriber, as the Journal is indispensable; a single number often being worth more to me than the whole volume. This has been a good season for bees, that is until the linden blossoms failed, which was about the 15th of July. All our surplus honey was white clover and linden. In the way of swarming, our bees done fine. My bees are most all Italians and hybrids, and in their winter-quarters in good condition. I have one queen that I got from Mr. A. Grimm of Wisconsin, and I think she is a perfect beauty. With the honey extractor, I took from one of my hybrid stocks 225 pounds of white clover and linden honey. I used a double hive and only extracted from the upper hive. I think 40 pounds was the most box honey I got from any one stock, and that was a hybrid.

UNEXPERIENCED.

West Union, Iowa.

Information Wanted.

I am starting with 12 stands Italian bees and expect to have as many more black bees and wish to Italianize them this spring. I am within 40 rods of heavy timber on bottom land, the largest share of the timber is elm and cotton wood. There is also a large quantity of basswood and maple, hard and soft, some willow and tag-alder. I expect to sow something for bees, but do not know what. Can you tell me if the Rocky Mountain bee-plant is better for bees than Alsike clover, and will it pay to sow sweet clover for bees and is it good for anything except bees? Is there anything preferable to either or all of the above mentioned, for that purpose? I would like to get a honey extractor. Do you know what kind is best? I am prepossessed in favor of the Gray and

Winder machine on account of its being geared, but have never used any kind. Is common elder good for bees, and will it pay to cultivate it? I see there is much said about feeding bees syrup in order to make them more prolific in breeding, but have never seen a receipt for making the syrup. Will you please give me the above instructions, or refer me to some one who will, and oblige
NELSON PERKINS.

Houston Co., Minn.

I regard your Journal as invaluable to every apiarian who wishes and deserves success in the management of the bee. I have been a bee-keeper for about twenty years but a new beginner in this latitude. With one year's experience here I find it quite different from central Illinois. Some time in the future I hope to be able to contribute to your columns my success or reverses. Wishing the Journal unbounded success in its laudable endeavors, for I know its efforts are being felt all over this land.

JEREMIAH EWING.

Mont., Ohio.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—Once more we meet, but can any one of us avoid feeling the solemnity of the thought that our dear old friend of so many years is among the dead.

The presiding genius of all our disputes, successes, triumphs and sorrows, ever ready to assist and lenient as a kind parent to those who erred; giving these pages freely to all with the conviction, as he once expressed it, that "Truth is great and will prevail." May his successor, whoever he may be, be an equally good man, is our earnest prayer; that he may have the skill and experience at once of Mr. Wagner, we hardly dare hope.

Our bees are just on their summer stands. Three colonies are dead and we should have been lamenting their loss severely had not there been a peculiarity in regard to the matter that has made us rather rejoice at their loss. We believe we fed the sugar syrup to all colonies except five. These five were the American hives that were used double, and we found plenty of sealed honey to carry them through safely, so that the fullest combs were simply put into one of the hives and they were considered all right for winter.

Now, then, those that were dead were three out of the five and the remaining two were at the point of starvation, with the combs of all literally daubed with the excrement so plainly denoting bee cholera or dysentery.

If Mr. Gallup or any one else can give any other reason than food for colonies equal in number and every other condition (side by side in the house), that we know coming out with bright and clean combs and *not one half of their sealed combs of sugar syrup* consumed.

We are very much inclined to thank Mr. Langstroth for supplying the only remaining clue to the disease, viz., cider mills. Our bees visited

in droves a cider mill less than a quarter of a mile away, and we followed, of course, and found the ponace yellow with countless Italians. Every stock must have stored more or less.

We believe late discoveries in the medical world are showing that this *same* cider and excessive use of fruits in general are almost the direct cause of a long list of diseases in the human system, almost as disagreeable as that under which the poor bees have been suffering.

A friend asks if we are going to recommend the bees a beefsteak diet to secure healthy digestion and development of muscle; to which we reply that pure coffee sugar syrup seems to be to the bees as sure a remedy as the beef has been to us.

There is one reader of the Journal who we really hope, when he sees these lines will see that it is a positive duty of his to give the world a little more light on a subject that has been a life long study with him, with the aid of all modern appliances of science, most especially the microscope.

Does any one know of mignonette as a honey plant. Nothing under our observation has ever kept Italians so busy from July until late in fall as half-a-dozen stalks of what we purchased as tree mignonette.

Mr. A. S. Fuller, of Russel, N. Y., wrote us so favorably of it that we half decided to occupy the space between our four hundred basswood trees, ten and a half acres, to see if we could not at least keep the bees busy in the fall, for—

"Satan always finds mischief," etc.

Cider mills, etc., and besides we don't like to trouble our neighbors; even if they do laugh at the Italian capers, a joke, etc.

So Gallup wants to see what Novice will do when hit. Just this, our sincerest thanks and to really hope every other reader will say as frankly just what they think of us and wherein they think our views are contracted, one-sided or conceited, and we promise you we won't quarrel, even if we are right and you wrong.

Mr. Editor or each reader may decide for himself, after our reasons are given, which of us is right, or both, or neither (very likely the latter).

QUESTION.

Can a hive be made that will give as good results with combs spread out horizontally as with two stories, like the usual Langstroth form?

Now we are going to try hard to be frank and not make positive assertions. Mr. Gallup has made an enormous result from his hive. Was it the hive or the season? Could he not have done the same with a Langstroth of sufficient capacity? Hosmer, near him, has also made an enormous result with the American, and why will not the American shape of frame bear comparison with Gallup's?

Our six double American hives were placed side by side, with one entrance like the original hive, and one the opposite way, of course, and we mixed the brood all through, every time we extracted honey and even turned the hives "tother end to," as Gallup does, and for a few days they did go "in one end and out the other;"

but, as we stated before, they would soon all work over to one side or the other, or just as soon as they could get the brood hatched.

Our greatest objection to the Gallup style is the labor of handling so many small frames. Quinby uses the largest frame we know of and we really like the idea.

Do our readers remember what Gallup once said about brooding sticks in the spring?

Ain't there an awful pile of sticks hoarded, especially in June, in his hive, compared with those of larger frames.

Mr. Gallup, we shall not be astonished if you think us thick headed in this matter, nor should we be *very much* astonished if we really were so, for we can look back and see many times where we have been before.

Lifting off the upper story is quite a task, and we are ready for some improvement that does not give greater disadvantages.

Now, please don't send any of your patent hives to examine, kind friends. Our better half is well supplied with kindling wood for some time to come.

Dr. J. H. Salisbury, opposite Post Office, Cleveland, Ohio, wishes a piece of comb containing genuine foul brood, for microscopical examination. Will those so unfortunate as to have foul brood in their apiaries send him a small piece by mail. (Don't send any to us, we never want any in Medina county.) His large experience with microscopical forms of both animal and vegetable life, we think, will enable him to decide at once if foul brood be either, and very probably he may give us a remedy in any case, or some suggestion in regard to the remedy given by F. Abbe.

He has also promised to aid us by making examinations of drones produced from unfertile queens compared with those from fertile queens, and that we do really want some plain facts without theories and unprofitable argument on this subject is the candid opinion of your old friend,
NOVICE.

P. S.—Some one asks in the Journal where we get our jars? Of Messrs. Fahnstock, Fortune & Co., Pittsburg, Pa.; they cost about five cents each, corks, labels and all, for one pound jars. Those for two pounds, about seven cents.

Imported Queens.

We have found by dear experience, that a large number, if not the majority of the Italian queens we have imported have been short lived. Many of them have been superseded the first season, and others early the next. We attribute this to the fact that old queens may sometimes have been sent, but more to the way in which the transport boxes are prepared.

The queens which were sent to Mr. Parsons, in 1859, for himself, and the Agricultural Department, were put in common segar boxes, the combs were wedged into these boxes, and a few slits cut in them for ventilation. I assisted in opening a large number; all for the Agricultural Department were dead, and nearly all of Mr.

Parsons', besides others which came for another party. Out of fifty or more, I do not think we saved more than half a dozen. Some had starved to death, others were drowned in honey, others smothered, and others still, crushed between the combs, which got loose in the boxes. That same season Mr. Carey, of Coleraine, who had the care of Mr. Parsons' apiary, packed over one hundred to go to California, and only one of the number was lost.

In America we guarantee the safe arrival of our queens. We do not know of any breeder in Europe who guarantees the safe arrival of queens sent to this country. Of this we do not complain, but we cannot help feeling sore when our queens arrive dead, or so exhausted as to be short-lived if not worthless, because after our *repeated remontrances*, the transport boxes are overcrowded with bees.

We are, therefore, specially glad to learn that Messrs. Gray and Winder have determined to send Dr. Bohrer to Italy, this spring, to make an importation for them; for we believe that the Doctor will not only bring over live queens, but such as will arrive in good condition and give satisfaction. We shall make our own importations this season through them, and only wish it was our good fortune to go with the Doctor, and see the Italian bees in their own homes.

L. L. L.

[For the American Bee Journal.]

The Triangular Comb-guide again.

As we learn that Mr. K. P. Kidder is still demanding money from those using his comb-guide, we shall show from facts that have just come to our knowledge, that the salient angle or beveled edge for a comb-guide, was used in a hive with bars in 1848.

M. Fratière, in a work on bee-culture, "*Traité de l'éducation des abeilles*," published at Paris, in 1848, gives a wood-cut of a side-opening hive, very much like some of Dzierzon's; with two sets of slats or bars which are thus described:

"Un grillage léger composé de six ou sept baguettes triangulaires, dont un des angles sera tourné vers le bas, pour diriger le travail des abeilles." "A light grating composed of six or seven triangular sticks, one of the angles of which is turned downwards for directing the work of the bees."

The Clark patent, under which Mr. Kidder claims the absolute control of the triangular guide in bars or frames, having been issued in 1859, cannot cover the use of a device fully described in 1848.

We have repeatedly called the attention of bee keepers to the fact that the salient angle comb-guide, was described by the celebrated English surgeon, John Hunter, in 1792, and that we made, used and sold this same guide more than two years before Mr. Clark applied for a patent, which alone, according to the law, makes it public property.

Will Mr. Kidder take any notice of this prior use so clearly described by M. Fratière? We hope, at least, that the public will. More anon.

L. L. LANGSTROT.

THE AMERICAN BEE JOURNAL.

Washington, April, 1872.

All communications and letters of business should be addressed to

GEO. S. WAGNER,
Office of the American Bee Journal,
WASHINGTON, D. C.

In the next issue of our Journal we will give the first of the series of unedited letters of Huber.

The writer of the amusing adventures of the frogs and bees, p. 233, has probably drawn somewhat largely upon a vivid imagination; but we are disposed in the main to credit his story—but we do not believe that the old frog made himself a voluntary martyr for the public good, he only got ahead of the other thieves.

We feel it due to Mr. T. F. Bingham to give his article, by which he attempts to prove by "figures that cannot lie," that black bees are better honey gatherers than Italians. The columns of the Am. B. J. on this question, as well as all others connected with apiculture, will always be open to fair discussion.

We hope before long to give a monthly summary of the contents of the German, French and Italian Bee Journals, so that our readers may know the course of thought, and progress of invention in apiculture, in all parts of the world.

Our readers will no doubt rejoice to learn that an end has come to the controversy which of late has filled so many columns of our Journal. Circumstances beyond our control made these exposures necessary. We hope now to leave the merits of the matters in dispute to the impartial decision of U. S. District Court.

We have on hand a number of very excellent communications, which it was impossible to get in this number.

PUBLICATIONS RECEIVED.

The Rural Alabama. March, 1872.

J. Cochran, Havana, Ill. Catalogue of Flower and Vegetable Seeds.

L. Prang & Co., Schem's Universal Statistical Table.

From James Vick, Rochester, N. Y., a choice variety of Flower and Vegetable Seeds.

I deeply regret the loss of Mr. Wagner, for though I never had the pleasure of personal acquaintance, I could but regard him as a high-toned honorable man. And surely the American

Bee Journal was a model paper. I think it has no peer. The wise discrimination, the high tone, straight forward manner with which it was conducted could but elicit thorough and genuine regard.

A. J. COOK.

Lansing, Mich.

I once visited Mr. Wagner in York, Penna., just after his first importation of Italian queens, and my measure of the man was just as you have given it in the obituary notice. His conscientious thoroughness would have caused him to excel in anything he might undertake.

ERICK PARMELY.

New York.

Your letter informing me of Mr. Wagner's death is just before me. I cannot tell you how deeply I sympathize with you in the loss of your friend. One of the American fathers in bee-culture has fallen asleep. After I had learned to know Mr. Wagner's peculiar temperament through you I learned to appreciate him and to overlook what before I thought a harsh side to his nature.

I always admired him for his rare attainments in our beloved science and for his thorough independence of character. No one was so eminently fitted for the place he so gracefully filled. One of the great men in the theory and practice of apiculture has fallen, and we who have been benefited by his ripe culture should strew his memory with sweet immortelles.

E. VAN SLYKE.

Albany, N. Y.

The last number of the Bee Journal has just reached me, conveying the first tidings of your father's death. It came to me with a shock, for, although so advanced in years, his spirit seemed so youthful and energetic that I never dreamed of his passing away. His enthusiasm in behalf of bee-culture in the United States was of such a noble and pure character, his judgment in these matters so sound, and his influence among the different warring interests (for most of our aparians seem to partake more or less of the belligerent spirit of their little wards) was so great, that his loss is indeed a public calamity. I have received the Journal from its first establishment and have watched your father's course with the greatest respect and admiration.

T. C. PORTER.

Easton, Pa.

Mr. Samuel Wagner, editor of the *American Bee Journal*, died suddenly of apoplexy, at his residence in Washington on the 17th ultimo, at the age of sixty years. Every reader of his paper, who can but have admired his honest, straightforward, independent course as an editor, his hatred of all shams and humbuggery, and his earnest and intelligent devotion to the science of apiculture, will receive this intelligence with profound sorrow. His paper has ever been regarded as the ablest and most enlightened advocate of its specialty in our country, and we hope the demise of Mr. Wagner will not result in its discontinuance.—*Maine Farmer.*

[For the American Bee Journal.]

Questions Answered by Gallup

About the extractor, &c., it appears that comparatively few have yet learned the use of the extractor, and quite a number of those that already have one scarcely understand its great utility. I have quite a number of letters stating that they had always supposed that their locality was not a good one for surplus honey, but by following my instructions they now readily report surplus by the thousand pounds; and have come to the conclusion that all that is necessary is the requisite knowledge and practical experience, and I am asked questions by the hundred. Now I shall endeavor to answer some of them through the Journal. One prominent question is: *How much comb is required to give a stock abundance of room to work to the best advantage in a large yield of honey.*

From my last season's operations I have come to the conclusion that it requires just (or thereabout) twice the amount of comb that the queen occupies with brood. For example, a queen that occupied 16 of my combs required 32 combs. One occupying 26 required 52 to work to the best advantage. I had in my yard three New England queens of the extra light-colored variety. They would only occupy six combs, the best I could do for them; consequently my standard hive of 12 combs was plenty large enough and to spare for said stocks. As my combs are small there is but little danger of breaking or cracking them in the extractor; even the newest combs could be handled with proper care without breaking. I do not use anything to keep my frames at the proper distance apart in the hive. They are made so that they hang just where they are placed on the rabbits or cleats, all nails, screws, wire, staples, bits of tin or zinc, or any such contrivances are a perfect nuisance, and in the way when we come to handle the combs in and out of the extractor, and especially when we are in a hurry (and we are sometimes in a hurry when the honey is coming in by the ton).

And again we do not like, and never did, combs fixed at permanent distances in the hive. We like the genuine Langstroth principle of movable combs, because *they are movable* in the fullest sense of the word. Others are only partially movable. Understand, we are now giving our opinion not yours. Furthermore, neither Mr. Langstroth nor any of his agents ever attempted to bribe us to use or recommend his principle of movable combs. (Mr. Editor, we are now answering questions, so you will allow us considerable latitude.) We could empty any comb that had sealed brood in it without disturbing or injuring the brood in the least. There was none of the honey thin enough to sour, either in 1870 or 1871, with us.

Now, here comes a tough one; not a tough one to answer, but a tough one for people to believe. *In a good yield of honey how much will a good swarm store per day?* Now before answering this question I will state that I have sent an

article for publication setting forth the facts about our immense yield for eight days the past season, and that was what I call a good yield. I now firmly believe that I can get up stocks in my twin hive or any hive on that principle that will store at such a time from 40 to 60 pounds per day. Now don't call me a liar yet; get up as strong a stock as you ever saw and then place feeders enough in your yard containing liquid honey, all they can carry away, and give the bees abundance of room, without crowding, and abundance of comb to store in and you can form an approximate idea of the state of things for eight days the past season.

Mr. Hosmer at Cleveland gave an account of one stock storing 53 pounds in one day. I saw and became partially acquainted with him at Cincinnati, and I call him as candid and truthful a gentleman as I ever came across. (Mr. Hosmer's statement is included in the list of questions,) and is fully entitled to credit for his statement.

Again, do you believe that Mr. H. can winter a pint of bees and build them up to a swarm in the spring? *I certainly do.* Have I not told you in the back numbers of the American Bee Journal of successfully wintering less than a pint. I think I have. It requires experience and skill. The inexperienced had better not venture too far in that direction. It also requires young bees reared in the fall to winter successfully in such small quantities.

Which is the most profitable—box or extracted honey? I will answer in this manner: Where the main supply is white clover, which comes in gradually and continues quite a length of time, it may be most profitable to work for both box and extracted honey, but here where our main supply is from basswood and it comes with a rush and then is over, we cannot get it in boxes. We will say if from a good stock we get 50 pounds in boxes (that is old-fashioned or standard stock) we can safely get 300 pounds with the extractor or in that proportion, or five to one; now reckoning 60 pounds at 20 cents per pound is \$12, and 300 pounds at 10 cents is \$30. 15 cents is the lowest we have sold any of our extracted honey. We go in for the extracted honey and the extractor. We also go in for supplying honey *so cheap* that it will no longer be a luxury, but every one can use it. Millions of tons of it are going to waste for the want of intelligent beekeepers to superintend the bees.

E. GALLUP.

SHADING IN THE WINTER.—Mr. Taylor says:—"Where the hives stand singly, I have always seen the advantages of fixing before each a wooden screen, nailed to a post sunk in the ground, and large enough to throw the whole front into shade. This does not interfere with the coming forth of the bees at a proper temperature, and it supercedes the necessity of shutting them up when snow is on the ground. This screen should be fixed a foot or two in advance, and so as to intercept the sun's rays, which will be chiefly in winter towards the west side."

[For the American Bee Journal.]

Foggy.

We notice in our article in the February No., page 187, after reading it carefully, that we left it a little foggy, and with your permission we will try to explain.

We said in our example we should make fifteen or twenty double swarms. This is providing that an increase of stocks is desired; if no increase is desired make only two or three, just to give room to return.

In 1870, we made only six new swarms from 32 colonies; all the rest were returned and the season was not very good, yet most all our returned swarms filled the boxes, and some of them two sets of boxes. But our neighbors that hived their swarms single got no honey, and the young swarms did not store enough to live till spring.

Another blunder. We said every stock in the yard will be storing honey. It should read, "except a few at the end of the swarming season that I had no bees to return back to." I made no count on second swarms. I do not allow any to issue from those I return bees back to.

Thanks to Mr. Grimm, we shall in future adopt his plan of doubling all stocks that remain in our yard after swarming, that we have no bees to send back to, then all will be strong enough to store honey while the clover is in bloom.

In 1871, we made quite an increase in our stock. We had a very serious misfortune or else a very beautiful blunder, we think the latter name the best. It cost us about \$3, out. We would not like to tell it just now but sometime will give it in a chapter on blunders.

JOSEPH BUTLER.

Mich., March 4, 1872.

[For the American Bee Journal.]

Queen Raising.

MR. EDITOR:—The demand for Italian queens this coming season seems to be greater than any past season. At least I find it so with me from the way orders come in. There is evidently a growing interest awakened in the culture of the bee.

Would it not be a good thing for the readers of the Journal at present, if the old and most experienced queen raisers, such as Longstreth, Quinby, Alley, Benedict, Mrs. Tupper and others, would give a full and detailed account of their method of rearing queens? Many of them have at various times given parts of their methods, but as the Journal is designed for the education of novices and not graduates they should give full detailed accounts, something like that of Alley on page 100, November No. current volume of Journal. Will Friend Alley have the kindness to complete that account for the next No. of the Journal, by way of answering the following questions:

You say you had two hundred and eighty

nucleii (queen boxes), in operation in August, besides the full stands, &c. How many full stands do you generally use to supply that number of nucleii boxes with bees, brood and honey, or do you by *liberal feeling* depend on the nucleii boxes to produce the amount of brood required to keep up their own strength without any aid from the full colonies?

What probable number of black bees are within three miles of you, and how far are the nearest, and are not some of your queens mated with bad drones?

Do you use many black bees for rearing queens, and how early in the spring do you commence in your latitude, &c.?

I generally raise in full colonies, but in summer I use about 20 nucleii boxes the same size as Alley, only I rear my cells in full colonies and introduce them in the boxes on the tenth or twelfth day. I am compelled to reinforce my boxes with young bees from full stocks every three weeks in order to keep them strong.

After writing the above I have just received the February number of the Journal, and while on it, would like to answer a question asked me by S. W. Loud, of Virden, Illinois, on page 184. "Asking me if I kill more bees by my close fitting frames than I do by loose ones." I have only tried one triumph hive the past season, and I do not think I killed as many bees as by loose frames; for the hive is so arranged that if used with care you need not kill a single bee. With the exception of the Longstreth, I never handled another hive, but that would kill five times as many bees.

The distinguishing feature of the February No. now before me, is the good news of the recovery of "Novice's" health. What would the Journal look like without him and Gallup, Grimm and a few others.

I must now close, wishing all the readers of the Journal the greatest success in 1872, and as Novice says "rows of barrels of honey."

R. M. ARGO.

Lowell, Ky., February, 1872.

[For the American Bee Journal.]

MR. EDITOR:—Kind sir, according to promise, please find enclosed two dollars for my subscription for another year to the Journal; the longer we take it the harder it appears to do without it. Mr. Editor, you have been trying to buy some of the back numbers, how you have succeeded I do not know, but one thing I do know, twenty-five cents won't buy any of my back numbers, although it looks like a big price. They are worth as much to me as to any other awkward ignoramus, if I would only obey their teachings better. I sometimes think I know something, and pay dear for finding out I know nothing.

You recollect I told you in the Journal that I had packed my hives away with their backs together, stuffing hay in between and on top, made a tight fence on the north and west sides, covered with boards; the weakest hives containing thirty-five pounds of comb and honey. Now, I thought they were all right, but I did not give them upward

ventilation. Thinks I, it is the bee nature to gum and close up tight every hole, nook and corner in the hive above them, and if I let it open they will surely freeze; consequently I lost some three or four stocks in Gallup hives. I do not blame the hive. I blame myself. My neighbor, T. P. Duncan, has an old box hive with a 2-inch hole in the top open all winter, and they are all right this spring. Some of my neighbors have informed me that they had some to starve this winter in old box hives with plenty of honey in the hive but no upper ventilation. I have a few fixed Robert Bickford fashion and they did well.

One of my neighbors, Finley Kruson, informed me the other week that a few years ago his boys went out with a gun, and happening to see some combs on the underside of the limb of a large tree, close to the stem, they shot in and knocked down some nice combs with honey and live bees. This was in the spring of the year, before swarming time, and they had evidently wintered out in the open air, with no other protection but the combs, limb and trunk of the tree. Don't you think they had upward ventilation enough? Who knows a similar case in this latitude?

I have got myself a honey slinger, but have not tried it yet. It is geared and runs nicely. I am also getting my new hives ready for operation when the emigrating season comes.

Fearing I am wearing your patience I will close by subscribing, as ever,

A MILLER.

By occupation, but not a moth miller.

[For the American Bee Journal.]

The "Hazen" Beehive.

On page 143 of January number of the Journal, I see "Novice" refers to Jasper Hazen and his opinion of the Italian bees; and in the same number, Mr. Grimm refers to his beehive.

In September 1867, I made a trip among beekeepers, and as I had previously, through the columns of the Country Gentleman, had some discussions with Mr. Hazen, about the respective merits of his non-swarming hive and the Langstroth hive, I called upon him.

I found him living in the outskirts of the city of Albany, N. Y., and a much older man than I expected to see; then 76 years of age, but full as vigorous as men will average at that age. I told him I wished to see his much lauded non-swarming hive, about which I had seen so much figuring to prove it the best of all hives made. He took me out to see them. He had five old stocks in the spring; but, as the season advanced, lo, they all cast swarms! I thought he seemed a little annoyed, that after all his puffing, his so called non-swarmers was a failure. I noticed, however, to my surprise, that he was appropriating Mr. Langstroth's invention, without due credit, and evidently with a disposition to detract from his claims as inventor and patentee.

He showed me, I should think, some four or five hundred pounds of box honey, some of it very nice.

In conversation with Mr. William Stratton, of West Troy, whom I visited the same day, he gave Mr. Hazen the credit of having a good hive for box honey. But although he had one hundred and forty stocks in his apiary, I did not see one of Mr. Hazen's hives among them. Mr. Stratton said it had been the best season for box honey in that locality he had ever experienced.

Mr. Hazen's hive (he then called it the Eureka,) is nothing more in effect, than a common box hive, about the size and shape of the one used and recommended by Mr. Quinby, with boxes applied to the top and sides.

D. C. HUNT.

North Tunbridge, Vt., Jan. 5, 1870.

New Mode of Destroying Wasps.

Wasps have been rather plentiful. I have for several years adopted a very simple, yet very effectual plan of getting rid of their nests. When I find a nest, I select the noon of a hot sunny day for my operations. I procure a very strong solution of cyanide of potassium, and I saturate a piece of lint, about three or four inches square with the solution. This lint I quietly place at the hole leading to the nest in the ground, in a bank or elsewhere. Nothing more is requisite. Every wasp that arrives at the hole, on its descent alights on the lint, and after one or two gyrations, drops over the edge of the lint into the hole, dead, or else dies upon the lint—not one escapes. After sitting down by the side, watching the operation for about ten or fifteen minutes at most, the number of wasps arriving home becomes very much lessened, and then only a few odd ones arrive. I then dig out the nest. All are destroyed. There is no fuss, no risk of being stung, as every wasp coming home falls on the fatal lint, and has no escape. The evaporation of the cyanide is very rapid, and the air all around the hole is tainted, and the wasps seem fascinated by it, as I never saw any turn away. They look as if they must settle, and when they once alight they have no power to raise themselves; the use of the wings is gone, and they are soon dead from the inhalation of the cyanide.

This is a very simple way of destroying the nest, because if you do not wish to take the nest you may leave the lint there. It will destroy all the nest, and will do no harm to anything else.

When the nest is in a tree, I generally go in the evening, and hold the lint soaked in the cyanide under the bottom hole. The wasps soon begin to drop out, first one by one, then in a regular shower. Of course caution must be used to avoid the inhalation of the cyanide; but as so little is required, it is not very probable any accident will result from the proceeding.—*Cor. Journal Horticulture.*

Omne Epigramma set instur apis, aculeus illi,
sint sua miella, sit et corporis exigui.—MARTIAL.

"Three things must Epigrams, like bees, have all,
A sting, and honey, and a body small."

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VII.

MAY, 1872.

No. 11.

[For Wagner's American Bee Journal.]

Letters of F. Huber.

We have the pleasure of presenting to our readers the first of the promised unedited letters of the world renowned Huber. They were first given to the world in *L'Apiculteur*, the French Bee Journal so ably edited by M. H. Hamet.

These letters will have special interest for those who know how largely bee-culture is indebted to the genius, energy, and wonderful enthusiasm of the blind apiarian of Geneva. Some portions of them give charming glimpses of his inner life. François Huber, as we read them, becomes a name more loved and honored than ever. His cheerful heartiness in promoting the welfare of others; his generous appreciation of merit wherever found; his wise discrimination (so seldom at fault) between facts observed and mere theories or conjectures; his readiness to admit his own mistakes and deficiencies; his genuine modesty and almost child-like simplicity, should be studied carefully by all who aspire to benefit their fellow men by describing the works of the Great Creator.

Reading these letters for the first time, when confined to our bed by a railroad accident, we sometimes felt almost as though Huber was standing before us, and we were about to take him by the hand, and express our affection for the man to whom, in common with the whole apiarian world, we owe so much.

Knowing how difficult it is in our moments of enthusiasm not to overestimate our discoveries and inventions, how often have we wished that we could question the first inventor of a movable frame, to learn from him the practical results which he secured by it in his own apiary; how he obviated what seemed to be its inherent difficulties, and what, if any improvements he made upon it. We expected, of course, no answer to such vain longings, when lo! we have as it were Huber *redivivus*, telling us with his own lips the reasons which prevented him from carrying his speculations into practice—criticizing this and that defect of his hive; suggesting alterations and improvements, which go far to convince us that had he been able to use his own eyes, he would have excelled as much in practical as he did in scientific apiculture.

Imagine Huber in his apiary, with eyes, ministering fully to his wonderfully inquisitive and penetrating intellect, and how many mistakes, compelled by his reliance upon others, might have been avoided? Might he not have given a consistency and practical efficiency to his discoveries and inventions, which we now see ought necessarily to have flowed from them, and yet which were not reached until more than half a century after his first letters were published to the world?

L. L. LANGSTROTH.

[From *L'Apiculteur*.]

Unpublished Letters of F. Huber.

Under the title of Apicultural Documents, we publish the correspondence of Huber with a distinguished practical beekeeper of Switzerland, C. F. Petitpierre Dubied—who was for a short time, in some measure, a co-worker with the distinguished observer of Geneva. The apiary of Dubied was at Couvet, and was one of the largest in the Canton. Some of Huber's letters were written by himself—others were written by his wife or daughter at his dictation.

OUCHY, October 12, 1860.

SIR:—I have just received your letter of September 15th. It has been nearly a month in reaching me, as you see—having been directed to Pregny, which place I left nearly eight years ago. I am flattered, sir, with the confidence you so freely place in me. My observations in Natural History have disclosed to me a method which may be of advantage to beekeepers. I promised myself to be the first to test it; but the circumstances in which I, as well as so many others have been placed,* have not permitted me to give any consistency to my speculations.

Some persons have given my leaf a trial, and because they did not take all the necessary precautions, or were not seconded by the skill of their assistants, it has not proved in their hands as great a success as Burnens found it, and as I was too ready to believe all others would. This method then has certainly the disadvantage of requiring both skill and courage† in those who practice it or to whom it is entrusted. But when these qualities are united I venture to assert that it promises more advantages than any others that have been proposed. I advise those persons then, who have done me

*Owing to the French Revolution of 1789. Ed.

†Huber's original letters suggest very obviously, what this and other remarks to follow, put beyond question, viz.: that he did not know how easily bees could be pacified by a little smoke or sweetened water. With this knowledge, the Huber hive, with its close fitting sections, can be used by any one of ordinary skill and courage, who is willing to devote the extra time required for all manipulations.

L. L. L.

the honor to consult me, and whose assistants possess only ordinary skill and intelligence, to adhere to the hive and system of M. de Gelieu.* With very slight alterations it can be adapted to the formation of artificial swarms. Its construction is very simple, its size handy, and it has this further advantage over mine—that its success has been confirmed by time.

M. de Gelieu can reply much better than I to most of your questions; but since you place some value upon my opinion, I will give it you, asking only a little time for reflection. I only write you to-day, sir, to announce my reply, and to prevent you from deeming me guilty of negligence towards you of which I am innocent. I will do my utmost to prove to you the interest I take in your success. Rest assured of this, sir, and believe in my devotion.

F. H.

P. S. If you have the courage to try the leaf hive, you must first try it on a small scale. It is enough perhaps, for the first year, to have four or five of this style, which will answer for instructing your employees in the necessary manipulations. Experience and observation have compelled me to make two alterations in the construction of this hive. The first does away with the hinges which have a disadvantage which I will explain to you another time. The second is in the entrances which I have placed at the bottom of each leaf. Instead of these you must make one, about an inch longer, in each of the two boards which close the small sides of the hive, fitting to it Palteau's entrance regulator. If you expect to stock five leaf hives next spring, it will be advisable to have ten made this winter. The extra frames, you see, will then answer for alternating empty frames between the full ones. Cylindrical hives would be good if they were not too difficult to make accurately. Therefore, I prefer square frames dovetailed together.

(Translated by Dr. EHRICK PARMLEY.)

* Gelieu published in 1773 a work entitled "*A new method of making artificial swarms.*" L. L. L.

[For Wagner's American Bee Journal.]

Queen Nurseries.

As nothing is said on the subject of queen nurseries in the 3d edition of my work on bees, published in 1869, some of the readers of the Journal may be interested in an extract from the 2d edition (published in 1857), page 237.

"I shall here describe what may be called a *queen nursery*, which I have contrived to aid those who are engaged in the rapid multiplication of colonies by artificial means. A solid block, about an inch and a quarter thick, is substituted for one of my frames; holes of about one and a half inches in diameter are bored through it, and covered on both sides with gauze wire, which should be permanently fastened on one side, and arranged in the form of slides on the other, for convenience in opening. A hole should be made in the wire large enough to

admit a worker,* and yet confine a young queen when hatched.

"If the apiarian has a number of sealed queens, and there is danger that some may hatch and destroy the others before he can make use of them in forming artificial swarms, he may very carefully cut out the combs containing them, and place each in a separate cradle! The bees having access to them, will give them proper attention, supplying them with food as soon as they are hatched, and then they will always be on hand for use when needed. This nursery must of course be established in a hive which has no mature queen, or it will quickly be transformed into a slaughter-house by the bees.

"In the first edition of this work (published May, 1853), in speaking of the queen nursery, I remarked as follows: I have not yet tested this plan so thoroughly as to be *certain* that it will succeed. . . . When I first used this nursery, I did not give the bees access to it, and I found that the queens were not properly developed, and died in their cells. Perhaps they did not receive sufficient warmth, or were not treated in some other important respects as they would have been if left under the care of the bees. In the multiplicity of my experiments, I did not repeat this one under a sufficient variety of circumstances to ascertain the precise cause of failure, nor have I as yet tried whether it will answer perfectly, by admitting the bees to the queen cells.

"Since writing the above, I have found that this nursery answers perfectly the end designed, by giving the workers access to the queen cells."

L. L. LANGSTROTH.

* One side might be covered with tin, having perforations just five thirty-seconds of an inch wide. L. L. L., 1872.

[For the American Bee Journal.]

Nucleus Hives.

In reply to Rusticus, on page 204, March No., and also to numerous correspondents, I will give my method of managing nucleus hives. In the first place to stock our nucleus, we select two combs from a populous hive containing mature brood and honey at the top of the comb with all the adhering bees. Be careful not to get the old queen. We do this at the approach of evening. We place these two combs in one apartment; on the following morning we insert a sealed and nearly mature queen cell in one of these combs. The reader will understand we prefer raising our queen cells in populous stocks that have abundance of brood and nursing bees. The old workers will be apt to go back to the parent stock, and if this leaves the nucleus too weak before the young workers are hatched out in sufficient numbers, we go to any large and populous stock in the middle of the day, take out combs from the centre of the stock, and shake or brush down the adhering workers in front of the nucleus and let them enter: they will be well received, and in this manner you get all young bees to stock your nucleus as young bees less than six days old will stay wherever they are placed. This is a very good plan for strengthening up any stocks. Now our nucleus having all young bees may not gather anything for a few days, and unless supplied, they sometimes suffer for the want of water, so we keep a piece of sponge saturated with water

at the entrance; a piece of old comb or even a cotton rag will contain water for them if attended to. As soon as the young queen hatches, we place an empty frame in the centre of the nucleus between these two full combs, and by this time our little fellows have or are ready to commence operations, and we have any quantity of wax workers and nursing bees, and they will invariably fill this empty frame with nice worker comb. The reader will remember our nucleus hive contains three combs in each apartment, and right here we will state that we stock the four apartments all at the same time. We prefer to give the parent stocks empty combs instead of empty frames, for with an old queen the bees are very apt to build too much drone comb to suit us. If you have understood us thus far, you will perceive, that the removal of our combs containing brood and adhering bees from strong stocks and replacing empty worker comb has not perceptibly injured the stock, from which the nucleus was stocked. We have lost nothing, but have gained a good nucleus. To keep this nucleus in good running order, we extract the honey as it is required, giving the young queen abundance of room to deposit eggs, and the nursing bees and wax workers abundance of employment, and to keep those nucleus strong and numerous, we exchange combs occasionally, as required with strong stocks, giving the strong stock an empty comb or a comb containing eggs and young brood from the nuclei, and giving the nuclei a comb from the strong stock containing mature brood. We think there is nothing gained, but a great deal lost in keeping 'weak nucleus stocks. In fact we want them fairly overrun with bees. In the description of our nucleus hive we forgot to mention, that there should be an inch hole near the top of each apartment, directly over the entrance, for ventilating in hot weather. This hole can be opened or closed either with a slide or a pine or cork plug. We prefer the plug. It should usually be closed at all times in cool weather or at night. You will now see that if rightly managed, there will be no desertion of queens. Great heat will drive out a swarm from any hive, and so it will from these nuclei, and we have a miniature swarm here, so if we have two queen cells, they are so strong and so numerous, that the first queen hatching will lead out a swarm, therefore we must allow only one cell to mature in the nucleus. If we wish to raise queens in these nuclei, we insert a comb (new combs always preferred) in the centre of the nuclei containing eggs and larvæ just hatched, and either cutting out holes and cutting down cells to the foundation, or trimming up the lower edge of the comb to suit our fancy, as we like to have large cells hanging perpendicular with abundance of food placed in the bottom; therefore, whether nuclei or standard stock for raising *good queens*, the nursing bees must be preparing large quantities of food for larvæ at the time of starting queen cells. We do not like too many cells started, as we think in such cases the nurses are apt to neglect all but a few. Therefore we frequently have worthless natural queens.

Now, Mr. Rusticus, you will see with our ideas and management there is not that great necessity for the wire cloth partition that many suppose. I have never used it, but saw it used in Dr. Hamlin's apiary. We have thought that it might make the bees all of the same scent, and thus at times create a difficulty, but as we have never used it, we cannot speak with certainty.

With our method of stocking nuclei, we never have to place them in the cellar. Recollect we are not giving our instructions to those that know more than we do, but to those that know less. We prefer to leave the young queen in the nucleus, until she has stocked it well with brood and eggs. Before removing her, you will recollect that we stated, we had about 60 pounds of extracted honey and 20 frames filled with nice worker comb from one nucleus hive, last season. Now, if you have understood us thus far, you will perceive that these nuclei thus managed will work just as well in proportion to their numbers, as the strongest and largest stock in your apiary, and we have violated no law of *their nature*, either in raising queens or restricting the production of that queen when she is raised, and we have received a profit in honey and new comb fully equal to the profit of standard stocks, as they are usually managed, leaving out the profit of extra queens raised, &c. You will see in the article giving the description of our hive, how to make a standard stock of each of these nucleus hives in the fall.

ELISHA GALLUP.

Orchard, Iowa, March 15, 1872.

[For the American Bee Journal.]

Bees in Louisiana.

DEAR FRIEND:—After an absence of nearly two years, I have returned to my former home, and much to my surprise, found at the Village P. O. all the numbers of your Journal, from January, 1870. In my late home, my pursuits were of such a nature, that I had but little time to devote to my pets, and therefore did not renew my subscription, which expired with 1869. * * *

Last year I had two colonies of black bees, "a present from an old negro," with which to commence. My limited leisure did not permit much care of them, yet I increased them by artificial swarming to five stocks and secured five wild swarms from the Cypress swarms in the rear of my house. There was but little forage until the month of March, when white clover was abundant. This continued until about June 1st, after which there was but little of anything to be had producing honey. The rains in the spring interfered much with the yield of honey, which was very short; say about twenty pounds to each colony, leaving them an additional supply of about ten pounds. They have wintered well in the open air as is the custom here, and there have been but few days during the entire winter, when they were not flying. * * *

The orange trees will be in bloom next week, and from them the bees gather the most delicate of all honey; then comes the White Clover during three months, and if there is not too much rain, I hope to secure a liberal supply of sweets.

I wish the Journal many years of success,
GEORGE HOWE, M. D.
Parish Plaquemines, Louisiana.

[For the American Bee Journal.]

Non-Flying Fertilization.

MR. EDITOR:—In the February issue of the American Bee Journal, in the article of Mr. W. R. King, on non-flying fertilization, page 178, he says: "Let us now see what we have in these boxes. First, a young, unfertilized queen, six or seven days old, anxious to meet the drone. She passes in and out three or four times a day. Second, we have twenty or more drones that have never flown in the open air. They are not conscious of a larger, brighter world abroad. They fly around and around, and are satisfied; even glad to know that they have such a world as this, free from the fiery old workers. Here they have it all to themselves."

It would have been fortunate had Mr. King told us whether or not the drones passed in and out of the boxes during the day like the queen, or do they fly around and around, and die the first day of their egress. Doubtless in this lies the grand success of non-flying fertilization. The box or nucleus can be kept strong with drones of the right age, by frequently inserting combs with young drones hatching, and the number sufficient to keep up animal heat in the absence of the workers.

Hatch and confine queens in nursery cages until the fifth or sixth day, and when the drones are flying through the fertilizing house, let the queen loose in the house, and if she is immediately fertilized, remove her.

I have completed my fertilizing house for \$30.

It is permanently framed together, and can be carried wherever desired. If non-flying fertilization is a failure, as some suppose it will be, I will have a good fruit house frame left for my part of the trouble.

A. SALISBURY.

Cumargo, Ill.

[For Wagner's American Bee Journal.]

Linden Plantations.

In reading Mr. Gallup's very interesting article in the April No. on Linden honey, I noticed specially his remark that one variety of the Linden near him blossomed some ten days earlier than the other. The European Linden usually blossoms a week or ten days earlier than the American, and a bee farm covered with these three varieties might prolong the bloom for a month. Even this time might be lengthened by a wise selection of other varieties.

Those who are acquainted with the superior quality of the Linden honey, are aware that the time is at hand when large plantations will be made for apian purposes. The tree is easily

propagated, grows very rapidly, and blossoms quite freely when only a few years old. The wood is extensively used for inside cabinet work, and for all kinds of work requiring material light and springy, and which can be made to take and keep almost any desired shape. In some sections of the country its value for lumber is second only to that of the pine, and if acres of Linden should be set out in such places, they would soon become for this purpose, highly profitable, to say nothing of their value for honey supplies.

The attention of our National and State governments has been called strongly to the dangers which menace the country from the wide destruction of our native forests. Already, they are proposing plans for the encouragement of new plantations, and we believe that aid will soon be offered to enterprising apianians, in making extensive plantings of our best native honey-producing trees.

L. L. LANGSTROTH.

[For the American Bee Journal.]

Central Iowa Beekeepers' Association.

PROCEEDINGS OF THE FIRST ANNUAL MEETING
HELD AT CEDAR RAPIDS, JAN. 18 AND 19, 1872.

The Association met at 10 o'clock A. M., January 18th, and was called to order by the President, W. H. Furman, of Cedar Rapids.

A constitution was presented and adopted.

The Association then proceeded to the election of officers for the next year, with the following result:

President—W. H. Furman, of Cedar Rapids.

First Vice Pres't—W. F. Kirk, of Muscatine.

Second Vice Pres't—D. W. Thayer, of Vinton.

Sec'y and Treas'r—G. W. Barclay, of Vinton.

A committee to prepare subjects for discussion was then appointed, and the Association adjourned to meet at 1½ o'clock P. M.

AFTERNOON SESSION.

The Association met pursuant to adjournment, and commenced the discussion of the

First Question:—"What is the best method of swarming bees artificially?"

Mr. May, Cedar Rapids. Asked how bees could best be swarmed so as not to have them chase a fellow.

Dr. Blakesley, Anamosa. I move a strong old colony to a new place; draw cards of comb with eggs, brood and honey from it; place in a new hive and set the new hive in place of the old one, and when the queen cells are ready, form other nuclei and furnish them with queen cells. Then stock up with cards from other hives. The old hive may swarm after that.

Thos. Hair, Marion. Agree with Dr. Blakesley.

J. H. White, Monticello. Takes frames enough from several colonies to make a new one, and sets it where the best old colony stands. Don't be too hasty in multiplying colonies. I have made six from one in a season, and lost all. Keep colonies strong.

W. F. Kirk, Muscatine. Unless I could

swarm bees artificially, I would not keep them. Take two or three frames and the queen from a good colony, put in a new hive and set it in place of the old one, and so have worker comb in the colony that has no queen. Commence as soon in the spring as the colonies are strong enough, and before they commence queen cells. Keep all colonies strong by giving weak ones comb from strong ones. Have managed five hundred colonies in this way and never lost any.

Wm. Townsend, of West Branch, and J. Lewis, of Cedar Rapids, agree with Kirk's method.

Mr. White. Puts a fertile queen with the colony when swarming artificially; no danger of swarming if you commence early, before queen cells are made. Put on boxes early. Equalize all colonies in the spring and in September, by giving weak ones comb from strong ones.

Mr. Furman. If I had but one stock I would take two or three combs, generally two, with the adhering bees and place them in a new hive; place the new hive in the place of the old one. If I had stocks enough should draw a comb with the queen and a quart of bees from a strong stock, put in a new hive, and set the new hive in the place of some other strong stock. Divide as soon as there is a supply of honey in the spring.

Second Question :—"What is the best method of handling bees so as to avoid exciting their anger?"

Mr. Hair. Bees are like men; some are terribly cross. Smoke such thoroughly. If the colonies are gentle, handle them carefully, and give a little sweetened water, perhaps. For smoking I use mostly rotten wood.

Mr. Kirk. Unless bees have honey to fill themselves with, the more you smoke them the crosser they become.

Mr. May. I want to know of Kirk what the object is in smoking bees. Is it in some mysterious manner to make honey for them?

Mr. Kirk. Bees are like Mr. May. If his house was on fire he would grab all the most valuable things he could leave with, and while loaded down he couldn't fight.

Third Question :—"What is the best method of procuring honey in the comb for market?"

Mr. Furman. Use boxes that will hold from five to six pounds. It is sometimes difficult to get bees to work in them. I put in three guide combs; the middle one to reach from the top to the bottom of the box, and placed right side up. Fasten with bees-wax and rosin. It is essential to have empty comb for this purpose. If you have none, empty the honey from some of your combs and place back in the hive, so that the bees may dress it up. Then cut in strips and put in the boxes.

Mr. Hoagland, Fayette County. Bees will work much sooner in the boxes if guide combs are put in. Put them right side up. Think box honey much the best way to prepare honey for the market.

Fourth Question :—"Do bees gather honey from honey dew?"

Mr. Furman. Think they do.

Mr. Kirk. There were tons of honey gathered from it in our region, and it was not as good as buckwheat honey.

W. S. Goodhue, Lisbon. Where I reside, bees gather honey rapidly from honey dew, and it is of splendid quality.

Mr. White. Have seen bees so thick on white oak that I thought they were swarming, and I believe they were at work on honey dew.

Mr. Peters, Anamosa. I believe the quality depends upon the time the honey is gathered. If gathered early it is white; if later it is dark colored. Sometimes it appears in June, and sometimes in August. Found only in dry, warm seasons.

Fifth Question :—"Will it pay to use the 'Extractor'?"

G. W. Barclay, Tipton. Think it will. It is a great benefit when the combs are loaded with honey. For want of breeding room some colonies become weak. Use the "Extractor" and give breeding room. If put up good and honest, extracted honey will pay better at ten cents per pound than honey in comb at thirty or thirty-five cents a pound. I believe we get more box honey by using the "Extractor," having more breeding room we have stronger swarms.

Mr. Hodge. I have my doubt abouts the "Extractor" being a benefit or profitable. We can't get box honey when there is room below for storing it. We can sell honey in the boxes when we can't sell extracted honey; for the comb is beautiful, and nice for the table. It attracts attention and comment.

Mr. Furman. I have known of the "Extractor" for five years, and was slow to adopt it. I got one a year ago and I like it. When I came to colonies that were at work in boxes, I let them alone. But I found that where bees were not at work in the boxes, extracting set them to work in them, because the comb extracted from was wet with honey, and they would not deposit honey in it till it was cleaned up. Shall use "Extractor" oftener next year. It saves time and honey. I took 100 lbs. of extracted and 37 lbs. of box honey from one hive, and might have taken more.

Mr. Hair. Some like candied honey best, but comb looks best. People are prejudiced against extracted honey, because they have used strained honey, which is mixed with bee-bread, the crushed young bees, etc., etc.,

Mr. King. I purchased five swarms last spring and they increased to twelve, and I got 500 pounds of extracted honey.

Mr. Furman. Extracting should be done every three days.

Adjourned to 7 o'clock P. M.

EVENING SESSION.

The Association met pursuant to adjournment, and commenced the discussion of the

Sixth Question :—"Is the Italian bee superior to the native or black, and are hybrids better than the native?"

Mr. Kirk. Italians adhere to combs better than the black; are better workers, and more prolific. These three things make them very much superior to the black.

Mr. Goodhue. The Italian will gather honey where the black will starve.

Mr. Peters. One Italian swarm is as good as one and a half of blacks, for robbing; but they are not as liable to rob.

Mr. Townsend. The Italian queens lay their eggs more compact than the black, consequently, are more prolific.

Mr. Barclay. One stand of hybrids is as good as two stands of the natives.

Seventh Question:—"What is the best method of wintering bees?"

Mr. Hoagland. I stand a row of crotches in the ground and lay on a pole for a ridge pole. I then lay on rails, one end on the ground, and the other on the ridge pole. Then cover with straw and put on about a foot of dirt, make a door at one end, ventilate well and keep entirely dark.

W. M. Lauphere, Benton County.—Put my hives up in the form of a pyramid, and cover same as Hoagland.

Mr. Furman. I winter my bees in my house cellar. It is very important to keep an even temperature. I keep the thermometer at about 40. If it is too warm the bees will crawl out.

Mr. Kirk. A dry, dark cellar is as good as anything.

Mr. White. Have wintered bees in the cellar two winters with good success.

Dr. Blakesley. Keep mine in the cellar and like it. They come out in good condition in the spring. Give good ventilation.

W. Hunt, Center Point. Am strictly successful with Langstroth's system.

Mr. Barclay. Have best success out doors with the cob system. Like prairie hay in the caps.

Adjourned to 9½ o'clock A. M., to-morrow.

FRIDAY MORNING, Jan. 19.

The Association met pursuant to adjournment.

Mr. Furman. Said he had succeeded in getting the State Board of Agriculture to offer liberal premiums for the best display of Honey, "Extractors," Bees, etc.

It was voted that when we adjourn, it be to meet at such time and place during the next State Fair, as the executive committee may select. [To meet in Cedar Rapids, if a room can be secured.—Sec'y.]

Discussions on the

Eighth Question:—"In what way can we best get rid of fertile workers?"

Mr. White. If a queen is successfully introduced she will destroy the fertile workers.

Mr. King. Shake the bees into a new hive in a new location, and let the bees go back to the old hive, and the fertile workers won't be likely to get back into the old hive.

Mr. Furman. Fertile workers lay several eggs in a cell, and skip some cells; but queens lay compact. Agree with Mr. King as to the best method of getting rid of fertile workers.

Mr. Hair. Agree with Mr. King.

Ninth Question:—"Are spiders, wrens and king birds friends of the apiarist, in the destruction of the bee moth?"

Mr. White. I don't want any spiders around my hives. Have killed and opened king birds, and never found any bees.

Mr. Peters. Thought king birds a benefit.

Mr. Heald. Had killed king birds and cut open their crops and found them filled with bees.

Mr. Barclay. Believe the king bird was a friend of the apiarist; but believed the Missouri Fitch would prove more of an enemy to the bee than the bee moth.

Adjourned to 1½ o'clock P. M.

AFTERNOON SESSION.

Tenth Question:—"What is the best manner of rearing queens?"

Mr. Furman. My manner of rearing queens is to form nuclei in the spring by taking one or two cards with bees, eggs and brood from a populous colony and put in a nuclei hive; shut the bees in and set in the cellar for a day or two. Take them from the cellar near sundown and let them fly. When the queen hatches examine her and see that her wings, legs, &c., are perfect. The next day after the queen is taken away insert another queen cell. I keep a record of my doings on the hive.

Mr. White. Experience limited,—raise early in season.

Eleventh Question:—"Can queens be fertilized in confinement?"

Mr. White. Have tried Mitchell's way and failed.

Mr. Furman. I believe it is impossible to do it. At the National Beekeepers' Convention I offered \$500 to any man or woman that would come to my apiary and fertilize fifty queens in confinement for me.

On the best time to remove bees from winter quarters, all who expressed an opinion, said: the best time is when there is no more danger of injury by cold snaps.

Mr. Furman. Said he marked his hives from one up, and kept a book with the pages numbered to correspond with his hives, and used a page for each hive.

On spring feeding Mr. Hair said he used dry comb, pouring the feed over it and laying on the honey board or tops of frames. Also, feed rye flour.

Mr. Barclay. Make a feeder six inches square of lath, stretch muslin over the top and put feed on that; the bees will suck it through. I feed rye flour, also.

Mr. Furman. Said he was going to feed all stocks more. It stimulates them and we get strong stocks early. They will brood faster and eat more honey, giving room for breeding. Feed regularly, every day a little at a time.

Mr. White. I fed rye flour to twenty swarms last spring, and they ate about half a bushel.

Mr. May. Said he was aware that men took rye in its liquid form, and could not see how temperance men could conscientiously feed rye to bees.

The following resolutions were adopted:

Resolved, That to allow bees to winter on their summer stands is no better economy than to let other stock go unprovided for.

Resolved, That the American people have been thoroughly humbugged by patent bee-hive vendors.

Resolved, That every bee-culturist ought to take one or more bee journals, to the end that bee-culture as a science may take that elevated position among the industries of the State, that is eminently its due.

Resolved, That the President and Secretary of this Association be instructed to collect statistics as to the rise, progress and success of bee-culture in the State, and as to its value as a source of wealth to individuals and to the State.

The President, W. H. Furman, at the request of the Association, delivered an address on bee-culture, — a copy of which was requested for publication, but Mr. Furman refused to comply with the request.

At the request of Mr. Williams, a committee was appointed to prepare a brief and concise article on bee-culture, to be published by him in a pamphlet he is preparing for gratuitous circulation among the farmers of the State.

The thanks of the Association were tendered to those papers that gave notice of this meeting; to the C. & N. W. and B. C. R. & M. R. R. for reduced fare; to citizens and hotels of Cedar Rapids, for reduced charges; to the City Council for the free use of the City Hall; to the officers of the Association, for their efficient labors; and last, but not least, to the State Board of Agriculture, for offering increased premiums for the productions of the apiary.

There was a large attendance of beekeepers at the Association, and the session was a pleasant and profitable one.

MEMBERS' NAMES.

W. H. Furman, J. M. May, I. J. Rogers, C. C. Williams and Abel Evans, Cedar Rapids; Thomas Hare, Lydia Hare, Ida Hare, Eliza Hare and Louisa M. Downs, Marion; D. W. Thayer, S. A. Thayer and A. S. Charberson, Vinton; Dr. E. Blakesley, Lizzie Blakesley and R. O. Peters, Anamosa; W. M. Lanphear and Mr. Sandsbury, Belle Plaine; W. Hunt and E. D. Hazeltine, Center Point; Ezra Heald and Wm. Townsend, West Branch; A. R. Foster and J. B. Thomas, Mt. Vernon; G. H. White, Monticello; A. J. Langaman, Blairstown; E. A. King, Jefferson; Hiram Hoagland, Douglas; Geo. W. Barclay, Tipton; Dr. M. Chandler, Maquoketa; Dr. A. B. Mason, Waterloo; W. S. Goodhue, Lisbon; W. F. Kirk, Muscatine; James Lewis, Sigourney; J. A. Bartholomew, Western; Sarah A. Dodge, Fairfax.

The next annual meeting of the Association will be held at Cedar Rapids, on the third Wednesday in January, 1873.

W. H. FURMAN, *Pres.*

GEO. W. BARCLAY, *Sec'y.*

A. B. MASON, *Ass't Sec'y.*

In Germany, France and Italy they are settling upon a nomenclature for all matters connected with bee-keeping. Until we have definite terms in English, we shall continue to be diffusive or to "beat the air."

L. L. L.

[For the American Bee Journal.]

Italian vs. Black Bees.

It is with profound regret that I read in the March number of the Journal that its honored editor is no more; few men have exerted themselves in the bee interest like him; the first to embark in a disinterested bee journal, wholly for the good of the beekeeping world. I say disinterested, because all or nearly all who followed him with bee publications have axes to grind, and publish their papers for the double purpose of advertising their own stock of trade, and at the same time have others to pay them for doing it. Such men are no public benefactors; the less we have to do with them, the better. I am glad to learn, that although the head is removed, the Journal still lives, and will continue its monthly visits as heretofore. It is, indeed, sorrowful to learn that so honorable a member of the bee fraternity has gone; one upon whom we could rely, whose counsel was always pure and unbiased, and who was so abundantly able and willing to enlighten the great body of apiarians of the land. Personally, I never became acquainted with the deceased, but I have been a constant reader of his journal for several years, and I feel as though one of my nearest relatives had been removed.

On page 209, March number of the American Bee Journal, I find an article by Mr. J. M. Marvin, which is a perfect smasher in the bee line. I knew that bee science was rapidly being perfected, but that article was so far ahead of all I ever read or heard of, that I feel like saying a word; 1st, because the report of a certain bee convention made him say that Italian bees did not work in boxes; that having proper knowledge, more box honey can be got from Italian bees than from black bees, and that he can get the extracted honey all put back again in boxes. If this is so, it is certainly a blessing that few men have got that knowledge, for then surely would the bees suffer. But in my limited experience, I find that neither Italians nor black bees will store honey in supers until the body of the hive is full. I might extract it from the body of the hive as often as I pleased, and give the bees access to it, they would invariably carry it back to the brood chamber again. The instinct of the honey bee is to store its supplies as near the brood as possible.

In the next place, he argues that the common reason why some fail to get the *Italians to work as well in boxes as the blacks*, is because the Italians work earlier and later in the season, and when the weather is cool, and few bees in the hive. I am sorry to say that I could never get either the black or Italian bees to store in boxes under such circumstances, and if he can, I would in connection with a great many other bee men, be much obliged if he would give us his *modus operandi* in the next Journal.

He next jumps into Adam Grimm because he says box honey is more convenient for transportation, and that he, Marvin, is obliged to accompany his box honey to market in order to prevent the railroad or other carriers from stealing, &c.

This is not so necessary in extracted honey. He says: "The Arctic explorers or shippers to cold climates would certainly choose a well cured, good, solid article of extracted honey." Well; suppose they do, is that an argument that box honey is not preferable, and that it should not be made? Is it not well understood that artificial honey is and can be made, and that extracted honey can be and often is adulterated, and that many persons on that account will not buy, much less use it? that extracted honey, even if pure, will not sell near as readily or for as good a price as box honey? Mr. Grimm doubtless understands perfectly well, and probably acts in a great measure upon it, notwithstanding all that Mr. Marvin or other men may say. "All dealers would certainly dispense with boxes and wax if they could acquire the knowledge." (What knowledge?) "And especially in the tropics." I would like the gentleman to explain. Again, he says: "How will it be with boxes with wax comb." I did not know that the bees made any other but wax combs, and as for breaking down in cold weather, and moth worms hatching in warm climates, the former can be remedied by making the boxes of a proper size and secure packing, and the latter is no great evil, as honey hardly ever stands over long enough to be damaged in that way. Upon the whole, I think the gentleman's article is too highly colored, and that very little good is derived by beginners from such writings. I, however, must confess that I am yet a novice at the business, and have much yet to learn. With due regard for all, I hope that I have not offended any one, and sorry, indeed, would I be, if I had. This has been a hard winter in our section. Many bees have died, and I fear many more, if not attended to, will die before the spring arrives. Few bees kept in the old-fashioned way, will get over, and I think such a season as the last, will convince old fogies that luck has little to do with successful bee-keeping, and that good management and plenty of it, alone will prove the best luck.

WM. BAKER.

Milford Station, Pa., March 16, 1872.

Dronings.

Anticipating what some critics may think of my desultory comments and questions, I beg leave to "take out a patent" on the above caption.

1. Would it not be of great service, Mr. Editor, to many of your readers, and especially beginners, if you would give us every month, a brief list of "Hints?" You would in that way save many a tyro from that fearful "too late," which so often throws him back a whole year in indispensable bee work. You may answer that the latitude of your circulation is so great that your "Hints" would not suit all, but as your journal is issued with such admirable punctuality, the first of every month, surely within the thirty days, your suggestions would come home to every beekeeper from Florida to Maine.

2. Let me advise my brethren, against transferring from box hives to movable frame hives in

April, or at any time before swarming—unless indeed they have some urgent reason—and it must be very urgent to compensate for the almost inevitable loss of brood, danger of robbery, and certain delay in swarming, accumulation of honey, &c., &c. Last April I transferred a swarm from an old box hive to one of Alley's, and apparently with great success, but in a day or two, the robbers set in persistently, and I had a long and wearisome fight with them. I conquered them at last, but the bees did not store one pound of surplus until nearly the close of the season. When they did get into the side boxes, they worked splendidly, but I firmly believe that if I had waited until June to transfer them, I should have done greatly better.

3. Wont somebody tell us of a certain plan for securing straight combs? I have tilted my hives at every practicable angle. I have put in the nicest bits of comb guides. I have used Colvins' separators, and still "one event confounds them all," the obstinate wretches in the majority of cases (like the Irishman's hog, that "ran up all manners of streets") will run every way but up and down; the only guaranty, as far as I know, is to have full sheets of empty comb, to alternate with empty frames.

4. The more attractive we can make our honey, the more salable will it be, obviously. In England (as I find from a recent work of Alfred Neighbour's), it is all the fashion to secure honey in glasses, most of them with flat tops, of various sizes, some of them with apertures of three inches in the tops to allow the passage of the bees to and from upper glasses, they have (in most of them) ventilating tubes, which would soon be useless *eo nomine*, on account of propolis, but would answer admirably as nuclei for the combs. These glasses need not be of first quality, and if ordered in sufficient quantities, might be furnished (I should think) at such rates as would justify us in using them largely. Nine purchasers out of ten would prefer to pay the additional price, especially for that particular pattern of glass, which being flat topped (and provided with a lid), can be inverted, placed upon the table, and when emptied, could be used until next spring as an ordinary preserve jar. I would cheerfully furnish this book to you, Mr. Editor, if you think well enough of my suggestions to have the illustration of these glasses transferred to the Journal. They could readily be gotten up in time for the honey season.

5. I have heard that the editor of our Journal has translated the full works of Huber, with notes and appendix, bringing the science up to the present day. If so, let us start a subscription list, and insist upon the publication. I offer the modest sum of ten dollars to begin with.

B.

In some seasons bees will get very little honey from the white clover, although all the conditions are apparently favorable. In the same way, Italian bees will in some seasons get little or no honey from the second crop of red clover, while in others they will store largely from this source, while black bees are losing weight.

[For Wagner's American Bee Journal.]

A Well Assumed Moral Indignation!

That our readers may judge impartially, we insert Mr. H. A. King's reply to our personal of March last.

The Defence Of Mr. L. Against "Misrepresentation."

"Whom the gods would destroy they first make mad."

For more than a year past, we have been the object of the grossest misrepresentations and the vilest insinuations, but up to the time of Mr. Wagner's death, Mr. Langstroth himself had maintained his usual dignified position in this controversy. But "how are the mighty fallen." Scarcely were the funeral services of Mr. Wagner ended, when Mr. L. seized his pen, and descending far below the plane of common respect, gives vent to a tirade of foul aspersions and dark insinuations while under the influence of a well assumed "moral indignation."

For this furious outburst, which he says some of his readers may think is overdue and "will recoil upon himself," he pleads as an excuse, what he calls our "December utterances" against him, and that a sacred duty to the late Mr. Wagner demanded it. Mr. L. must have carelessly neglected the imperative call of duty, or else this is *only* an excuse, for his article contains no defence of Mr. W., nor a reply to anything said against him; and Mr. Fisher, Jr., one of Langstroth & Otis's attorneys, pronounced our December article "a fair and genteel discussion on the subject." We believe it has been Mr. L.'s policy from the first to have *others* keep up a steady fire against us, hoping to secure our defeat, and eventually our service in his behalf. About a year since he said that if he had been connected with a man like us, he would have done well; and not long afterwards, he said to us, "with your energy, you would have made a fortune out of my patent." We replied by telling him that in view of his course, in refusing to compromise, we should give him the benefit of all the energy he gave us credit for.

Our success in obtaining testimony invalidating his patent, caused a change in his tactics. If we could not be forced to capitulate by warfare, perhaps our desire for peace, and supposed love of money might induce us to give them the victory. Hence a share of the spoils, and a union with such illustrious men was tendered to us. The dishonorable terms of compromise to secure a union and an extension were rejected, but the proposition admonished us of our duty in another direction. We acted promptly and energetically, and not without success, as the pen of Mr. L. has well proven.

We believe these are the acts which have driven him to desperation. He has become convinced that the proposed union cannot be effected, and now he "will hold no terms with such a man." There is nothing more to be gained, and as he alone is left, he will have the satisfaction of dealing the deadly blows of revenge, himself. We told Mr. Otis that they had no one to blame but themselves, for they refused to compromise when we could have done so honorably, for then we had not the thousandth part of the evidence we now have, against Mr. L.'s claims, but we *never* could have united with any one to collect blackmail from the honest beekeepers of the land. We would not intimate that Mr. L. himself has ever done this, for we will make no insinuations against his character. Our editorial written at Washington be-

fore we had heard of Mr. L.'s accident, or Mr. W.'s death, closed with the following words:

But as we said before, so we still say, we have no ill will towards Mr. Wagner, or Otis, and that we have the same kind regards for Mr. Langstroth, that we have ever manifested. And we stand ready, as soon as the conflict is over, to do more for him than we ever proposed to do.

He refuses to give credit to our Christian character and non-resistant principles, and labors to convince his readers, that our heart is full of malice towards him. He says we boast of our religious devotion, and as proof, quotes the following, from a biographical sketch of our life, published in the *Phrenological Journal*, February, 1871, and leaves his readers to infer, that the language is our own:

Active out-of-door exercise having now restored the health of Mr. King, his impulses of duty, again called him to the home missionary field. A peculiarity in his labor, was that he never received any pay for his ministerial work, not even for traveling expenses, when called to journey for the benefit of his fellow men, many miles by rail. This has given him great power with skeptical minds, since they could not question the purity of his motives, and the sincerity of his purposes.

The business, however, to which he gave such impetus, now began to feel the effects of his absence, and yielding to a strong outside pressure, upon mature deliberation, he decided to return to his business, under the solemn vow that he would use all his surplus income to advance the holy work to which he had devoted his youth.

Mr. L. may well quote:

Alas for the rarity of Christian charity,

for his whole article—especially at this point—is a sad, but forcible illustration of its truth. It is a common fault of biographers to praise too much, but it is not common for men of Mr. L.'s standing, to wander so far from the subject of controversy to obtain matter to injure the personal character of his opponent. If these are his best weapons, and his cause is to be maintained by poetical quotations, works of fiction and attacks upon our personal character, weak indeed must be his position against those who he imagines are his opponents and maligners.

We thank Mr. L. for his just criticism on our extract from the Cleveland paper concerning Mr. Moon's invention of movable frames. We quoted the report of most of the speeches from the Cleveland papers and put in that quotation without thinking that we were reporting it, officially, as secretary of the North American Beekeeper's Association. Mr. L. is also entitled to our thanks, for calling our attention to our announcement that we should not be a candidate for any office. By the solicitation of friends we concluded to allow our name to be used lest our opponents should claim that our refusal was evidence of fears of the result. We inform Mr. L. that the quotation from our JOURNAL, where we are represented as saying that Huber used the *present style* of frames, is a typographical error, as the context shows that it should read "section style."

The quotation about "bottomless pit," is itself a quotation from one of the attacks made on us a year ago. Mr. L.'s reply to Baron Von Berlepsch we trust will meet a response from that gentleman, and if so, the extent of our influence in the preparation of his "Declaration" will be exhibited, as well as the supposed discrepancies noticed in the *Bienenzeitung*.

Mr. King's complaints of "gross misrepresentations and vile insinuations," unsustained by any facts, come with very bad grace from the man who was the *first aggressor* in this controversy. Not until February, 1871, did Mr. Wagner call attention to the worthlessness of his patents—

while in December, 1870, Mr. King telegraphed to the convention at Indianapolis, these words :

"R. C. Otis, of Wisconsin is publicly making many false statements to defeat union at Cincinnati. Mr. Otis is no true friend to Mr. Langstroth." (See Am. B. J., Feb., 1871, p. 172.)

We call special attention to Mr. King's unqualified admission that up to last March, "Mr. Langstroth had maintained his usual dignified position in this controversy." Our course, however highly appreciated, was no protection against his insinuations of bribery, fraud and personal dishonor; nor from his very *un-dignified* sneers. The public will judge whether we have vindicated our friend by discharging "the sacred duty that was laid upon us of exposing" his calumniators. We have never attempted to influence any one to attack the character of Mr. King.

One year ago, in the presence of one of Mr. Otis' attorneys, we told Mr. King that his hives, in our opinion, had nothing of special value not covered by our patent; and that if at the beginning of his apiarian career he had honestly taken hold of our invention instead of infringing upon it, he might by his energy have made a fortune for us both. We think so still.

As we have never desired any compromise, but have sought in every legitimate way to bring the suit to a trial, our readers will place the proper estimate upon Mr. King's assertions, inferences, and conjectures on this subject.

Strong professions, of a desire to guard the public against "black mail," are suspicious, when made by one who has never remonstrated against the "beveled edge comb-guide" fraud, and who is engaged in selling "*rights*" to a hive which, while claiming to be covered by three patents, uses with some petty exceptions, the patented features of none of them.

Mr. King says that a year ago "he had not the thousandth part of the evidence against the Langstroth patent that he now has;" and yet he *then* informed us that the *foreign* evidence, if put into proper shape, was enough. Discerning men, gauging his necessities in the suit by his "year of toils" in Europe and America, will only laugh when he calls my claims "ridiculous;" they can never believe that he piles such Pelions upon Ossas, in the way of testimony, out of mere zeal for works of supererogation!

We want no charity from Mr. King, but if the courts decide that he has *our* money we shall be glad to get it.

Until Mr. King says that the revelation to the whole world of that "solemn vow" was unauthorized by him, he cannot be acquitted of the charge of violating the Master's precepts.

In the supplement to the January, 1871, No. of his paper, Mr. King *began* this controversy through the press, by devoting nearly three columns to a bitter attack upon the personal and business character of Mr. Otis. He prefaced it with this declaration: "It has been a rule of our life that when we could not speak well of a man, we would say nothing about him. We do not now propose to violate this rule"—and yet he scrupled not to insinuate that Mr. Otis had

been guilty of bribery and fraud, and makes this fling at his religious character: "We once reproved him, and should judge from his answer that he formerly belonged to a Christian church, but is now living in a backslidden state." Can a man who with loud professions of lofty morality, thus assails the good name of a business competitor, feel surprised that the purity of his motives should be questioned, or that men should think that while he "prays cream, he lives only skim milk?"

That our readers may see how little of *extract* or *quotation*, and how much of a desire to injure us, there is in that part of his *report* which we criticized, we give the language which he used. After describing "a beautiful honey pyramid which Mr. Moon had placed upon the President's table," he says:

"An article appeared in one of the Cleveland papers next day, to the effect that the beekeepers of America were greatly indebted to Mr. Moon for the first invention of movable comb frames in America, which have been used in various forms since their first invention by him in 1838. Although we did not know of its intended publication there until we saw it in the paper, yet we speak advisedly when we say that the movable frame, with narrow top bars suspended on rabbits, with shallow chamber, etc., should be called the 'Moon Frame.'"

If Mr. King still "thanks us for our just criticism," will he show it by retracting his charge that we violated the generous confidence reposed in us by those two conventions, or must we accept his recognition of our previous "dignified position," as a full withdrawal of all charges up to the date of that March personal?

Mr. King's failure to answer grave charges, while he carefully vindicates his historical accuracy from a typographical error, is very suggestive of that "*interpolated the*."

We are quite willing to wait for the Baron's explanation of the supposed discrepancies.

"*A well assumed moral indignation!*" Mr. King may yet have occasion to say: "These are a few of the unpleasantest words pen ever put to paper."

Stretched wounded and helpless on our bed, the best of friends had died in an adjoining room: instead of his genial morning salutations, came sudden word that he was dangerously ill, followed in a few minutes by the terrible announcement that he was dead. Mr. King coming (as he himself takes pains to inform the public) to that house of sorrow—need we say unbidden and most unwelcome—learned by his intrusion all these facts from our own lips; was, therefore, personally acquainted with the circumstances under which we wrote—heard that there was no likeness of our departed friend, and that we had not been able to take even a last look at his remains; knew further how soon after that visit there came to that afflicted family the accusations which appeared in the Indianapolis Journal. What need alas! was there on our part of any *pretended* moral indignation? and what a revelation does this man make of himself by his cruel suggestion!

If we did step beyond the limits which we had previously assigned to ourselves in this contro-

versy; if our facts were too strong to require any aid from epithets and comparisons however true and however obviously suggested—let our readers “put themselves in our place,” and picture the tragical circumstances under which we wrote.

In all this controversy, *Mr. King has given his readers only his own side*; while we have obeyed the almost sacred injunction “*audire alteram partem*” “to hear the other side,” so truly embodied in Mr. Wagner’s manly offer, and *have given our readers both sides*; so that if any injustice should be done, the bane and the antidote might go together. Only an honest cause could afford this.

Loathing the necessity which forced upon us these personal controversies, we again express the hope that they may be referred for settlement to the only impartial Tribunal.

L. L. LANGSTROTH.

Washington, D. C., April, 1872.

[For the American Bee Journal.]

Dysentery in Bees.

The winter just closing has been one of the most disastrous to bee-culture ever known in this State. I am of opinion that two-thirds of all the bees in this part of the State have died. Some beekeepers have lost all, and others have lost more than half. I have fared better than most others, having lost only five out of seventeen colonies, and only two of them by disease. The other three were smothered by a heavy sleet on newly-fallen snow. The disease that has carried off so many bees is what is termed dysentery. In most cases plenty of honey has been left in the hives.

I have been of opinion, since the disease first manifested itself, that it was caused by an inferior quality of honey gathered from the honey-dew that was so abundant last summer and fall. Honey-dew is produced by several kinds of aphides. That which was so abundant in this part of the country last season was the product of the white cottony looking insects called beech lice. Much of the honey stored from July to November was from this source, for it continued to be abundant even after the first severe frosts. Perhaps, if the winter had been mild like the preceding one, so that the bees could have had a good fly occasionally, they would have lived, notwithstanding the poor quality of the honey. I was confirmed in the opinion that the honey-dew predisposed the bees to disease by visiting, on yesterday, a neighborhood where there is no beech timber. There I found that the bees are wintering as well as could be desired, no colonies having been lost, and all seeming to be in a perfectly healthy condition.

If the honey had been extracted from the combs last fall, and the bees fed with sugar syrup until they had enough to winter them, they would, no doubt, have been in far better condition this spring.

M. MAHIN.

New Castle, Ind., March 1, 1872.

[For the American Bee Journal.]

The Winter in Michigan.

The past winter has been very disastrous to the beekeeping fraternity of Michigan, for throughout the State there has been a fearful fatality among the bees.

I have heard from several counties, and from all alike comes the doleful report of dysentery and death. We at the college have lost nine colonies, while many more unlucky still have from forty to one hundred deceased colonies.

The cause generally assigned for this fatality is the unparalleled severity of the winter. But as the symptoms are the same in every case, viz., much thin uncapped honey, sour and otherwise unwholesome to the taste, in all the lifeless hives, besmeared combs, and intolerable stench. We believe the cause to be the same in all cases, and think it as evident that it results from sour honey.

Our bees that have died were fixed for winter quarters the last of October.

We then noticed that there was a good deal of uncapped honey, but as it seemed sweet, we believed it would thicken, and be capped over before we should put them into the cellar.

We took considerable honey away, and were rather careful to take that which was nicely capped over to keep for spring feeding. We have a fine dry cellar, and have always had excellent success in wintering, so we passed the winter away from the college, without the least foreboding as to the welfare of our beautiful three-striped Italians. But a sad prospect awaited our return, our bees then appearing as stated above. Why the flowers of the past autumn should have yielded thin honey, which the bees should regard as unworthy of being capped, I think a mystery. If the season had been wet, instead of unprecedentedly dry, I think it would have seemed more explainable.

Last summer we used the two most excellent honey extractors, the Peabody and St. Charles, Illinois, machine, and extracted, I believe, from seven colonies enough to pay for either machine. If we had thrown out the thin honey in the fall and sold it, buying and feeding coffee sugar, *a la Novice*, I am sure we might still have our bees, thus saving \$90. If all our apiarists had done the same, thousands of dollars would have been saved to our State.

Apologizing to machines, I would say that no apiarist can afford to be without a mel-extractor. We also found Dr. Davis’ queen nursery most serviceable.

I cannot close this article without speaking my commendation of the neat Peabody Extractor, the St. Charles machine, rendered easy to work and admirably by the gearing, and Dr. Davis’ queen nursery, which is invaluable in helping us to raise and keep our queens without trouble or danger.

A. J. COOK.

Agricultural College, Lansing, Michigan.

Where did Noah preserve the bees during the flood? In the ark-hives.

[For the American Bee Journal.]

Doctors' Differences—Swarms and Strong Stocks.

The beginner in beekeeping meets with much to perplex him in the contradictory statements of those looked upon as "masters." I had concluded that on hiving a swarm, it was desirable to have it on its stand as soon as possible, otherwise the bees would mark the new location and adhere to it. In February number J. Butler recommends that swarms intended to be returned should be kept hived until after sunset. Will he oblige us by stating why this is necessary, and what is done with them from the time of hiving until they are returned? Will he also state what basket hives are? I have also thought that the great desideratum for safe wintering is strong stocks, but now comes Mr. Hosmer, at the Cleveland Convention, with the theory that all stocks should be reduced to one-quart, preparatory to going into winter quarters. To succeed, I presume this small quantity of bees must have peculiar management.

ENQUIRER.

*Carlton, Ontario, March, 1872.***Glycerine as Bee Feed and to Prevent Candying.**

MR. EDITOR:—In December number you state that glycerine is useful for the above purposes. What should be its price? In one town, I am told, 40 to 75 cents per pound, and am assured that both samples are pure. If glycerine will prevent sugar syrup from candying, might it not be added to the honey for the same purpose? I find that honey heated by being kept in boiling water, does not candy as long as it is kept in a dark vessel, but on its being drawn in glass vessels it candies directly.

ENQUIRER.

*Ontario, Canada, February, 1872.***Fertilizing Queens in Confinement.**

MESSRS. EDITORS:—You will allow me through the columns of your May number to answer the queries of brothers Nesbit and Gardner, in regard to fertilizing queens in confinement. I would have done so through the April number, but my March number did not come to hand in time, not having received it until the 14th, and you require all communications to be sent in by the 15th. Both brothers Nesbit and Gardner ask about the same questions in substance. 1st. Why do you place sweetened water in old combs on a shelf in the top end of the fertilizing room, if the workers are not allowed to fly? Answer: The drones become weary of flying, and very many of them will alight on this shelf, and there find something to refresh them; we are apprized of the fact that drones are not in the habit of taking refreshments from home. 2d. Why do I plank or board up the sides of the house two feet? Answer: We do not think a house six feet high is high enough; does not

give sufficient height for them to fly, unless you run your *tent pole* high in the centre. A smooth dirt floor might do as well as boards; we prefer the boards. 3d. Why do we put the dark calico over the top? Answer: To prevent the direct rays of the sun from creating too great heat upon the nucleus boxes. If the house could be arranged in the shade (not too much) of a tree or trees, common brown cotton may be used. 4th. Is there no chances of queens entering the wrong nucleus, and destroying each other? Answer: We never had one killed in this way; we mark our boxes differently, by painting, or by pieces of different colored paper. Now, Mr. Editor, we have, we believe, answered the Enquirers satisfactorily, and will simply add, that all apiarians who decide to build a fertilizer according to my plan, must carry out the *whole* plan as I have attempted to *fully* describe it through the journals. There is no doubt but some will fail, as I have before stated. Men love to add to or take from what they read; my motto is to fully carry out what I read, and if I fail at first, I consider all the circumstances, and frequently find that I was to blame. We are aware that there are a few doubting Thomas's. We are aware that there are men who will doubt even what their eyes see. Such men are presumptuous, and do not like to admit the fact that other men can experiment and bring new things to light. The world is full of such.

WILL R. KING.

Franklin, Ky.

[For the American Bee Journal.]

On Sugar Syrup for Wintering Bees.

In March number, page 212, Mr. L. L. Langstroth says: Novice's observation shown to me by Mr. Wagner, that bees when wintered on sugar syrup, in their first flight do not discharge their fæces like those fed on honey, is entirely new to me, &c. Novice, in his article on page 198, says: "We have read in the Journal of some such occurrence, but have always had a little doubt about their first flight in spring not showing some discolored spots on the clean snow, but now we have verified it sure." We were the one that Novice did not believe, or, in other words, the writer that he somewhat doubted. When we made such a statement in the American Bee Journal (we think it was in the American Bee Journal, but are not sure), we expected that but very few would believe us; but it was a fact, and belief or unbelief does not alter facts. The cry now comes up from any quantity of correspondents, that their bees are all dead, or have the bee cholera, &c. &c. The reader is already aware, if he has followed us in the American Bee Journal, that we do not believe that bee cholera, or dysentery as it is called, is a contagious disease. It is caused by improper food and improper ventilation. Remove the cause; allow the bees a purifying flight, and there is no more disease. Last spring was very dry in some localities, and there was large quantities of insect honey dew. In the absence of other forage, the bees stored

considerable quantities of it, and in many localities there was considerable late thin honey stored, and again in many cases, the bees were left on their summer stands, improperly prepared for winter, and the winter set in extra cold and early. The hives were filled with frost in every part (except in the cluster of bees), caused by the breath of the bees, and the first moderate weather melts and moistens up the hive, and also the honey to a certain extent.

Now, in reply to the note on page 212, we never tried emptying their honey, only suggested the plan. Our suggestions to correspondents are: If the cholera, or bee disease, as you call it, is caused by the insect honey stored in the hive, the remedy is to watch the sources from which your bees are gathering their supply and extract all this insect honey, and feed either good honey for winter, or sugar syrup. If caused by thin watery honey, extract all and evaporate by heat and feed it back again. I hold that 10 lbs. of good thick honey is better than 30 lbs. of thin, watery stuff; or, in other words, 10 lbs. of good honey, of the proper density, will go further towards wintering a swarm of bees than 30 lbs. of thin, watery honey. We have actually wintered swarms on the summer stands in an open bee shed and in an old-fashioned straw hive, when we lived in Lower Canada, where they were confined to the hive by the weather from the 1st of October until the 20th day of April (nearly 7 months), and at times during the winter the mercury was 40° below zero. Don't tell us that bees freeze to death in cold weather, when they are in a proper condition, for we shall doubt your word after our experience, even worse than Novice doubted ours. On their first flight, the bees did not even speck the snow one particle. We have wintered on the summer stands in Wisconsin, with just as good results in the Dutch hive. Those bees were wintered on good honey. We had no extractors in those days. Honey gathered in good weather, from white clover in June, or from basswood in July, is good enough for bees to winter on provided it is stored by a good strong stock, with plenty of nursing bees or evaporators. For in such a stock it is evaporated sufficiently before being sealed up. The reader will recollect, that with our first season's operations with the Hruschka, we stated that we had two stocks of black bees, and their honey was thin and watery, while honey gathered from the same source and at the same time by the Italians, was extra thick; we hastily and erroneously came to the conclusion that the difference in the breed of bees caused that difference, but another season's operations has convinced us that it is or was the condition that the stock was in at the time of gathering the honey. For illustration, take a large stock of all old bees (a stock that has been queenless for quite a while, and that has but very few nursing bees and no brood), and they will gather honey rapidly in a flush time, but their honey will be thin and watery, or imperfectly evaporated. We occasionally have cool, wet seasons, and none of the honey that is stored is of good quality for wintering purposes. I think it was Mr. Marvin, of St. Charles, Ill., that suggested, or had actu-

ally tried the experiment of extracting as fast as gathered, and evaporated by heat. At all events, this experiment should be tried, as it would increase the yield of honey per stock wonderfully in time of basswood bloom. In an article on wintering bees on their summer stand, we will give our views on preventing the accumulation of frost in the hive.

Orchard, Iowa.

ELISHA GALLUP.

[For the American Bee Journal.]

The "New Idea" Bee Hive.

Mr. Gallup, in the Journal for March, page 208, in an article on his "Twin Hive," says: "Mr. D. L. Adair has worked his sections in this manner for years, if we rightly understand him." With some little difference in details, I have, and it gives me pleasure to confirm most of the conclusions that friend Gallup has arrived at, but I think I have got the thing a little more perfect than he has. I, as long as two years ago, removed all cross-partitions in the hive, and now have one continuous chamber from 3 to 4 feet long, having discovered that they destroyed the unity of the colony, and that the queen would confine herself to fewer sheets of comb, and at the same time, and be more prolific when she could have it all compactly together. Her brood nest is made to occupy the middle of the chamber, while the ends are filled out with pure solid honey. The centre board or division, I find to be a positive injury, besides which, as Mr. Gallup uses it, it is covered by Albert Kelsey's patent, which I used ten years ago, and discarded on account of this very division board. The hive is simpler without the division, and will be found to work better. Without going into details, I will just say that this arrangement of hive proves with me to be more perfectly adapted to the instincts and wants of the bee than any I have seen. It is the only reliable plan for controlling swarming. It renders the mel-extractor useless for securing the greatest profit, as nearly as much honey can be secured in the comb as can be obtained by the honey machine, and will sell for three times as much per pound. By the use of the continuous chamber, and the unity of the colony thereby secured, I find I can secure three times as much honey as by any arrangement that requires the surplus to be deposited in boxes separated from the brood nest. I have in press a small book, intended to explain the theory on which the "New Idea Hive" is based.

D. L. ADAIR.

Hawesville, Ky.

We learn from several prominent beekeepers that if our suggestions in the last No. about using the *Hruschka*, to empty *thin* honey, in the Fall, could have been made last September, many colonies which have died of dysentery might have been saved.

L. L. L.

[For the American Bee Journal.]

Bee Feeders.

I have seen several kinds of bee-feeders described in your Journal, but I think I have the cheapest and the best, and as it will soon be time to set our bees out from their winter quarters and feed liquid sweets for early breeding, I will try to describe my feeder, so that any one can make it.

As I use the Langstroth hive, I will describe it for that kind of hive. Take a bottom board from a common honey box, about 5 by 6 inches square and $\frac{3}{4}$ of an inch thick; for the bottom nail blocks $\frac{1}{2}$ inch high around the entrance in the bottom, then nail on sides two inches high, then run melted beeswax in the joints, to make it water tight, then tack small strips from the top of the blocks around the entrance, slanting back to the bottom for the bees to walk out on, then set it over a hole on the honey board, pour in your feed, lay on a glass cover, so that by lifting the top of the hive, you can see when the feeder is out.

A. M. H.

Adams, Ill.

DEAR BEE JOURNAL:—With sorrow we read the account of the death of that most estimable citizen and naturalist, your founder, Samuel Wagner. Sad news, indeed, the March number carries to the beekeepers of our land. His place will not be easily filled. Not being personally acquainted with Mr. Wagner, little did we think he had lived beyond his three score and ten, for "its vigorous editorials," which were generally short, but pointed and always instructive, did not show a man who had lived beyond his allotted days.

To his energy and intelligence, as much or more than any one man, beekeeping has in a few years been elevated from an uncertain, mysterious and ignorant business to a systematic, scientific, and remunerative occupation.

He was respectful and courteous to those he deemed honest, and his criticisms, though often severe, were just, and although modest, he shrank not to expose, with cutting words, the noisy drones and pretenders in our great human hive. He certainly was a good judge of human nature.

To benefit his fellow men seemed to be the bent of his mind. He did not live for the present alone, and many generations will have come and passed away before the name of Samuel Wagner will be forgotten, but "the silver cord has been loosed," and

"Like crowded forest-trees we stand,
And some are mark'd to fall;
The axe will smite at God's command,
And soon shall smite us all."

W. P. H.

Murfreesboro, Tenn., March 14, 1873.

Italian bees, as a general rule, build more drone or store comb than black bees.

[For the American Bee Journal.]

Wintering Bees.

In reply to Novice, vol. 7, No. 8, p. 180, we did not give that swarm any brood or young bees. It was all the proceeds of one queen, and February 12th, 1872, that swarm is on its summer stand, and the queen is putting in her best licks, considering the season of the year. But comparatively few beekeepers yet know what a queen can do, providing we keep removing the sealed brood to the outside, and give her empty comb at just right intervals in the centre of the cluster for her to breed in. We tried Mr. Hazen's plan of giving brood to make up large swarms at once, and we know by experience that if we cannot have our stocks in condition for storing surplus, without that plan, it is an excellent one, for extra large swarms are what we want for storing surplus, whether in boxes or for the extractor.

We are wintering our large hives on the summer stands, and thus far, February 15th, 1872, we are highly pleased with the results. We understand that Quinby & Root, Mr. Hetherington, A. H. Hart, and several other prominent northern beekeepers, have adopted that method; and why should we not?

We have to thank Mr. C. C. Vanduzen, of Sproutbrook, N. Y. (who took the trouble to call on us over a year ago), for valuable hints on that head. Many beekeepers have no good cellars, and it is not always convenient to build special repositories. Then again, if all our bees are in the cellar, and the house takes fire and burns down, away go our little pets. Furthermore, our southern beekeepers must have hives that can be wintered on the summer stand. It is as absurd to tell him (when he has no ice) to put ice in his cellar to keep it cool, as it is to tell a northern beekeeper to rub his hives with peach leaves, to make his bees stay in the hives, when there are no peach trees near him.

ELISHA GALLUP.

[For the American Bee Journal.]

Correspondence.

MR. EDITOR: I have lost seven stocks this winter, by some disease I know nothing about. They died suddenly, with plenty of honey. They were in a warm house, well ventilated. Has it visited the apiaries of any of the readers of the Journal, and, if it has, can they tell me how it can be avoided? there seems to have been an epidemic among bees, this last winter in this district.

C. E. WIDENER.

Cumberland, Md., March 25, 1872.

Bees that were left out of doors have wintered very poorly in this section. One-third have died. Honey was poor. The dysentery affected them badly. March 24th, and it is snowing very hard. Please find enclosed a small amount and continue the Journal. We could not do without it. The sad news that we received in the last number of the Bee Journal of the death of Samuel Wagner was shocking. I could hardly

make it appear that it was our old Editor, until I read it over two or three times, but may the Journal prosper as ever.

Minna.

W. N. ROWLEY.

I like the *Bee Journal* more and more, it seems as if every number was better. I hope it will still continue to grow in the minds of the bee-keeping public, and that all interested will do all they can to increase its circulation both at home and abroad. Bees in this vicinity are wintering rather poorly. I think a great many colonies are as weak now, in numbers as they have been in former times, the 1st of April. Most of the bees in this vicinity are wintered on their summer stands, with no more protection than in the summer; the consequence is, a great many come out warm days and fall down on the snow and die. I think more bees are lost this way, here, than in any other way, except by foul brood.

Bee-keeping in this vicinity is not progressing any more than it was five years ago. Last September I was traveling in the West. I had the pleasure of visiting the apiary of Mr. Adam Grimm, of Jefferson, Wis. I must say that I never saw a nicer lot of honey gathered from any apiary than that of Mr. Grimm's; and here I had a good chance to see his Italian bees and his method of queen raising and shipping queens, &c.

I also called on Mr. Wolfe and Mr. Adam Furbringer to see their bees and I found none but Italians in my travels around Jefferson, so that all of the queens reared by Mr. Grimm were pure and mated with Italian drones. I saw some of the finest productive Italian queens I ever saw at Mr. Grimm's apiary; full swarms of Italians. If I were to purchase Italian bees or queens, I would as soon get them of Mr. Grimm as to send to Italy. With the advantages he has, I think his queens and bees are equally as pure and productive as any that can be found in any country. I came away well pleased with my visit and was well paid for my journey to Wisconsin, and hope I may live to take another trip out there again. D. W. FLETCHER.

Lansingville, N. Y., March 12, 1872.

The summer of 1871 was the poorest season for bees ever known in this part of the country.

No swarms and very little honey from the black bees. Our Italians swarmed *some* as a matter of course, but had to be *swarmed back again* in the fall or strengthened from other stocks.

We broke up quite a number of black stocks and divided their honey and bees among other stocks that were deficient.

Our bees are in winter quarters yet. We have not been into the cellar since about the first of December.

From appearances they will remain where they are for two weeks yet. G. H. BOWERMAN.

Bloomfield, Ontario, April 1, 1872.

It has been the worst season here in Central Michigan since November last—that I ever

knew, and I have not been without bees for three months in fifty-three years. I commenced the winter with 76 swarms, and have lost just one-half that number. Yet I have been more fortunate than most other beekeepers, as some have lost all, while others have lost from 80 to 90 per cent. on their investment. I attribute it to a combination of causes: 1st. Bees filled the body of their hives in June and July with a large amount of honey, leaving no room in the brood comb for their queens to deposit eggs for rearing workers, to supply the loss of superannuated bees. 2d. The weather was so cold for five months, that bees could not fly out at all to discharge the fæces, and consequently many died. This retention of their fæces produced cholera, as was shown by the besmearing of their hives and combs.

Now one word in favor of the Italians. My bees are mostly of that species, having bred from the most undoubted purity, from Mr. L. L. Langstroth, Mr. Nesbit and Mr. J. H. Townley.

My experience teaches me that the Italians are more hardy, more prolific, more easily handled, and will work earlier in the morning, later at night, and make more trips to the same fields in a given length of time than the mulattoes; also, less inclined to rob, beside swarming at least two weeks earlier. Last spring my first swarm came off on the 18th of May and no black bees swarmed till the 8th of June.

As to Alsike clover I think it is better for honey than any other honey producing plant I ever saw; also that it is better for hay or for pasture than any other grass, nor will it wash out on side hills or heave by hard freezing.

Byron, Mich., April 6, 1872. O. E. WOLCOTT.

Bees have wintered rather poorly on their summer stands, specking their hives badly; many dying, many not having an opportunity to fly out from the middle of November until about the middle of February. What are left are very weak, but are getting to work lively now. Mine have been at work on buckwheat flour since the 25th of March. I give them the fine bolted flour, pressed down in small heaps in vessels or on a plank. They waste but very little. My bees took but little notice of the flowers of the Partridge pea. Did not see over 3 or 4 on them throughout the season, yet they were very busy visiting two or three stalks of mother-wort close by; also catmint, portulaca, pansy and buckwheat. Yet the pea is a fine blossom for garden culture, even if bees do not attend to it, so, many thanks to the Commissioner of Agriculture for sending me the seed. I suppose through your agency.

Spring appears to be fairly opened now. Most of the frost is out of the ground and Alsike clover is starting finely. I have over four acres out, sown last spring. Some of it was in bloom by the 1st of July and kept in bloom until frost put a stop to it. I suppose the Journal will go on. We feel very sorry at losing the main leader of the Apiarian cause in America—if not in the world. MOSES BAILEY.

Winterset, Iowa, April 8, 1872.

Gallup Upon H. A. King.

Some of the readers of the American Bee Journal may think that our departed friend, Mr. Samuel Wagner, was too harsh with Mr. King. We ask them to bear in mind that Mr. Wagner, as well as Mr. Langstroth, and some others, was perfectly well acquainted with the man. He knew some of his saintly transactions carried on under the cloak of pretended friendship, and Mr. Wagner despised hypocrisy or rascality under the pretence of religion *so bad* that language failed him to express his honest indignation at such proceedings. I heard Mr. King tell us at the Cincinnati convention of his exceeding great love for Mr. Langstroth, and I thought at the time that I understood that love. It was something similar to the love that the highway robber or pickpocket has for his victim.

We too can read Mr. King, and it is sufficient for us to say, that we have severed all our relations with him. During the time that we were writing for his journal, he tried bribery on us, then flattery and soft soap, and last of all, he tried the driving process, and neither of them worked to his satisfaction. We are not in the market to be bought and sold by any one. Flattery and soft soap always make our bristles stand up the wrong way; and perhaps he thinks that we are too much of a hog to be driven. If he had just asked us at the start, we could have saved him all his trouble. Now, if Mr. King has any doubts about this bribery, flattery, or driving, all he has to do is to just ask for some of his private correspondence to be made public. We are aware that it is not manly to publish private correspondence, therefore we leave this matter with Mr. King, and shall govern ourselves accordingly.

In reply to correspondents who ask us why we did not answer Mr. Quinby's article in Mr. King's November number, we state that Mr. King refused to publish our reply, unless we withdrew all our connections with the American Bee Journal. He gave us his *ultimatum*: if we continued our relations with him, he would publish our article, but if we continued our relations with the American Bee Journal, why, then, all our relations with him were severed. We can assure our readers that it did not take us long to decide. We believe we came to a decision in that case the quickest of any case ever submitted to us. Now we have just said as little about this matter as we possibly could, and shall not mention it again unless Mr. King pitches into us, and then we shall defend ourselves to the best of our ability. So correspondents will please ask us no more questions on the above subject.

Let not the reader suppose for one moment that we bear any personal spite against Mr. King, but when we have once found a man to be of his stripe, we wish to have no more dealings with him. Neither did I wish to mix myself up with the controversy between him and Mr. Wagner or Mr. Langstroth; but his rascally attack on Mr. Wagner, in the National Bee Journal, through his partner, Mr. Williams, I thought

called for Mr. Wagner's friends to speak out. I certainly was a personal friend of Mr. Wagner, and whatever others may say, he was unselfish, and had the interest of the whole beekeeping fraternity at heart. The beekeepers of America have met with a loss in his death that can scarcely be estimated.

Mr. King has seen fit himself to show that Mr. Williams' statements about Mr. Wagner improperly influencing the patent office examiner, were falsehoods, and we presume if he had called the whole article falsehoods from beginning to end, he would have come very near the truth.

ELISHA GALLUP.

April 2, 1872.

[For the American Bee Journal.]

Novice.

MR. EDITOR AND BEEKEEPING FRIENDS ALL:—We are just now busy as bees planting out the embryo basswood orchard, and this is the way we work:

After the trees are removed (with a generous quantity of their native soil adhering to their roots) from their native forests, we bring them to our "ranche," as a friend calls it, when the ground is prepared as for planting corn. In order to occupy all the ground, we have them planted in the form of the cells of honey comb, with each tree the centre of six of its neighbors. We believe this the most economical plan to cover the ground with trees of any kind. Twelve feet each way was our first decision, but finally changed to sixteen feet. To get the desired points, we stretched a long line, and on this tie alternate pieces of black and white tape eight feet apart; when a tree is planted at all the white knots, each end of the line is moved to the next row fourteen and a quarter feet nearly, by means of measuring sticks. Now plant a tree on the black tapes; the third row on the white, etc., and you will have regular hexagons, with a tree in the centre.

A smart German with a fork removes the earth, and then *finds*, even if he has to go some distance, a fork full of some nice fine soil to sift over the roots when put in place (by a smart Englishman), while "Novice," Jr. (who thinks this part of the bee business more free from "onpleasant" peculiarities than some other branches), carefully sifts in with the dirt one ounce of ground bone, to give the young trees a start. After the trees were on the ground, the three hands mentioned above (all smart) put out in nice shape five hundred the first day.

As to Novice himself, he and his colt were a part of the time making the ground fine with one of Thomas' patent smoothing harrows, and then for a change, pruning most of the branches (that is, Novice, not the colt, although she seemed quite willing, and undoubtedly professed excellent *taste* for the business) after the trees were planted.

For the first three or four years we expect to give them careful cultivation, and shall this season raise a crop of corn among them, three

hills between each two trees; so we have the corn in hexagon also, and intend to cultivate all in three different directions, and if stirring the soil will make them grow, grow they will, undoubtedly. One hundred chestnut trees are to be planted in the centre of the grove, where the apiary is to be located, sheltered by heavy timber from the north and west wind. In answer to many inquiries, we would say that young basswood may be found in any forest where large trees abound and stock has been excluded. Ours range from one to ten feet in height, and no stock has been allowed in the woods for about six years.

We have really been so busy for the past two weeks at the rancho, that we could not even find time to get weighed, but feel so exceedingly well, that we think we must begin to have attained about the solidity of any *other* good honest farmer.

Friend Gallup, we haven't got over that hitting yet, and if it results in anything serious, who knows what may turn up. In fact, we went and bought a whole, nice, smooth pine board to make a Gallup hive, or rather a hive with Gallup frames; we could not yet bear to think of thirty-two such frames, or fifty-six in our hive, but thought to transfer a stock, so you need not say any more, we had not even tried one; but before we could make up our mind to spoil the board we could have done it awful quick with our pet buzz saw run by the wind mill, we remembered a friend who uses the unadulterated Gallup hive, and we saddled that same colt quick, and rushed through seven miles of mud and snow until we had found our friend, whom we catechized thus:

"Do you really think those small combs, less than a foot square, enable you to build up colonies quicker than the abandoned Langstroth frames?"

"Oh! yes, sir."

"And that the advantage is sufficient to pay for handling so many frames?"

"Yes, indeed."

"How many pounds of honey did you take from six such hives in 1871?"

"Over nine hundred, and almost my first attempt."

"And you used only a single story 20 inches long outside, and containing thirteen combs each, all that each hive had for brood or surplus?"

"Precisely"

"And if you wanted more room, how would you have it?"

"In the second story."

"And not in Gallup's New Idea?"

"No; for I cannot see *how* it could give any greater yield."

"Your hives are plain and simple; do you like the movable bottom board?"

"I do."

"And see no sufficient advantage for making a front portico?"

"No great advantage to the bees, but a great one for the spiders to spin their webs."

Now, Mr. Gallup, if Mr. Penn is right, why don't you use long frames a la Quinby, when

your colony is built up, or even eight long combs in the second story in the place of thirteen small ones. Or use a hive two feet long and one broad, small frames on spring, and long ones when we use the honey extractor, set in the hive lengthwise, and thus make available the amount of brooding space occupied with your petition boards, ends of frames, etc.

One frame 11 x 23 inches, would certainly be more convenient for the queen than two small ones with boards and sticks to break the continuity of it.

Where the extractor alone is used, we think perhaps something might be gained by a frame nearer square or a little deeper, but would not Mr. Gallup find his larger number of frames per hive in an apiary of one hundred stocks or more rather tedious? NOVICE.

[For the American Bee Journal.]

How Gallup's Bees Wintered.

MR. EDITOR:—In order to throw some light on this Bee Disease, we propose to answer Novice by giving the results of our wintering both on the summer stands and in the cellar. We started with 10 stocks on the stands, one in the Bay State hive and one in the Diamond hive, one in a standard Gallup hive and seven in the large Gallup. One of the swarms in the large hives lost their queen the first of September, and we introduced a young queen in the first week in October, consequently they had none but old bees and all died the first week in March with dysentery. The stocks in the Bay State and Diamond both died in February with Dysentery, yet they had young queens and an abundance of honey. The cause was evidently attributable to the form of the hive; as in long continued and steadily cold weather in a tall hive, the bees cluster in a few ranges of comb; this brings the mass or cluster in a wrong position, that is, the cluster is tall up and down, the consequence is, the bees at the top of the cluster are unnaturally warm, providing those at the bottom are kept at the right temperature, and dysentery has always been the result with me in extremely and steadily long continued cold weather.

For this very reason I have heretofore cautioned beekeepers against using a tall hive. A medium size is always the best. The 7 other stocks came through in splendid condition. I undertook to explain this at the Cleveland Convention, but was interrupted so much by Dr. Bohrer that I sat down in disgust. Don't understand me as saying that the form of the hive had anything to do with the bees of Novice dying, as they were probably indoors.

In my cellar I had 43 stocks and 5 nuclei. I lost two of the nuclei on account of their being all old bees. The three that wintered had all young bees and came through in splendid condition with the consumption of very little stores and no signs of dysentery.

Bees left to themselves stopped breeding earlier last season than common on account of the drouth. Old queens stopped laying from

two to three weeks earlier than young queens; consequently five stocks in the cellar with old queens had the dysentery when I set them out on the 26th of March, and large quantities of dead bees; probably two weeks longer of confinement would have used up the entire five stocks. I discovered that two stocks were queenless in September, and introduced young queens after it was too late for them to breed, hence they had all old bees and all died with dysentery the first week in March. If the weather had been mild enough to have allowed them a purifying flight I could have saved them. Knowing that my queens were stopping their breeding too early, I stimulated the stocks having my Grimm and Hamlin queens and kept them breeding up to the first of October. The consequence was they went into winter quarters with all young bees, and the result was (they were housed in about the middle of November, and taken out the 4th of April) that they remained comparatively dormant all winter, and the consumption of honey was almost nothing, and on their first flight there was no discharge, not even to speck the snow one particle, and a table-spoon would have held every dead bee in both hives. Now you can see that the theory of caging queens in the fall to prevent breeding and the consumption of honey, is a *splendid theory*, but ruinous in practice.

Again, if every thing is all right there is no necessity for carrying out bees for a flight in mid-winter. Our honey was excellent for wintering bees. No fault in the honey whatever. Now don't understand us as saying that all bees everywhere went up on the old age theory. The balance of our stocks came out splendidly.

E. GALLUP.

Orchard, Osage Co., Iowa, April 15, 1872.

Review of Foreign Bee Journals.

In the Eichstadt Bee Gazette for October (this journal has been published twenty-seven years), there is a report of the Beekeeper's Exposition in the Crystal Palace of the Capitol of Bavaria.

This Exposition was a success. "Truly," says Baroness Lina von Berlepsch, in closing her report, "the hearts of all beekeepers ought to be filled with pride at seeing the marvellous results of an enterprise founded by a new born association." Baron von Berlepsch, when asked by Professor Seibold, "Did you expect so much?" could but answer, "No;" so numerous were the products exposed and so superior to all expectations.

The Baron, in an appendix to the report of the Baroness, speaks of the different sizes of the hives exhibited, and insists on the necessity of a uniform size of frames. The importance of such uniformity is increasingly felt in this country. He says further:

There were but two articles that could properly be called new: a *double hive* from Mehrling and a model for the wintering of bees in the ground, from Antonio Wagner, of Vilsbiburg.

The great sensation of the Exposition was the artificial honey of Mehrling. He exhibited jars containing honey and honey combs, claiming that he had fed bees with a decoction of germinated barley, prepared as by the brewers when making beer, which the bees transformed into honey in their stomachs. He says that each hive can thus be made to yield a yearly profit of twenty-five dollars, as the liquid does not cost more than one-third the price of honey.

I maintain in opposition to this, that bees cannot change into honey any sweet substances, for I have made similar experiments, and they have always produced results the very opposite to those claimed by Mehrling. The substances that I presented to the bees always remained unchanged, and were never converted into honey. Among the several experiments that I made with Gunther, in 1854.*

I offered some prepared beet juice to the bees, but they refused to touch it so long as I did not mix it with honey. After adding about one-half honey to it they began to carry it into their cells, but the mixture showed no signs of change. In 1856 I had in Seebach a quantity of *Reine Claude* plums. I extracted the stones, and gave the juice to the bees. The taste was not changed after it was stored in their cells. In 1857 I cooked some very sweet pears and offered the juice to the bees,† they would not touch it until I mixed some honey with it, but it remained only pear juice when stored in their cells. These are my experiments, and they are entirely contrary to those of Mehrling. I invite all German beekeepers to make similar experiments, to see whether bees can convert a sweet substance into real honey, or whether, according to my experience and that of Dzierzon, they can only gather natural supplies without changing their taste.

Like many beekeepers present at the Exposition, I am of opinion that Mehrling for the pleasure of hoaxing the beekeepers, exhibited real honey as an artificial product.

If his declarations were true, the matter would be of the highest importance. The Association of Nuremberg has promised to experiment in the matter.

C. P. DADANT, *Translator*.

The juice of barley (*wort*) has since been tried by Mr. G. Barbo as a stimulating spring beed. We translate the article from the Italian journal *L'Apicoltore*, March, 1872.

CH. DADANT.

* In 1853, the Gilmore patent, with its arrangement for converting cheap watered Cuba honey into a splendid marketable article, was in full vogue, and a large apiary was erected in Brooklyn, to show the workings of the system. The cheap food was exhibited, and the luxurious product (gathered, however, by bees from far different sources) was also exhibited. The whole thing soon fell into merited contempt. See p. 331 of the 1st edition of my work (published in May, 1853), for a full exposition of such frauds, and conclusions precisely similar to those of the Baron.—L. L. L.

† Columella recommends feeding destitute colonies with such sweet juices.—L. L. L.

"We invite beekeepers to use barley liquor for bee-food and report their success. In the second fortnight of February I began to give this stimulating food to six colonies. The bees accepted it, although I gave it pure, but took it with greater avidity after a little honey was mixed with it. They left no residue, not even the mealy part with which the decoction was saturated. The barley (*malt*) arrives from Germany already germinated, and costs at the brewery a little over sixteen cents a gallon. The decoction must not be prepared more than four or five days in advance, or it might sour. Four or five gallons of juice are obtained from a gallon of the germinated barley, by boiling it in water two hours, and adding a little honey. This stimulating and economical food has the advantage of not attracting robbers. The feeders should be cleaned (scalded) every four or five days."

A propos to the transmutation of sweet substances into honey, the Rev. Jesuit Babaz published a book in France, in 1869, in which he described his method of feeding sugared water to bees to be transformed into honey. By scenting the feed with vanilla or other aromatics, he succeeds in producing honey of different sorts; but he hopes for a decrease in the price of sugar to make this industry a *paying business*!

My opinion is that the surest and best method of producing honey is to take good care of the bees, that they may be able to gather the millions of pounds of honey now wasted.

CH. DADANT.

[For the American Bee Journal.]

MR. EDITOR:—In the January number of the Bee Journal, Mr. Gallup gives the dimensions of *his* hive, and tells the amount of honey produced by a single colony of bees. Also of the wonderful prolificness of *his* queens, and winds up by saying, "*Let the donkeys bray*."

As none of them have *brayed*, I presume they think of "*Gallup*," as the old Dutchman, "who was breaking a colt," did of his *son*, whom he had placed in the bush to *bah* at the colt, to cure him of being *scarey*. The boy *did bah*, and the colt upset the Dutchman, and run away. "Ah!" says the Dutchman, "*you bah too loud*." Now, old donkey, don't *bah* so *loud* next time.

Then in the April number, he says: "Mr. Furman stated at the beekeepers' convention, that he did not believe such statements. and that they were false," &c. Now, I suppose Mr. Gallup says this to draw me out, as he did one of the writers of the National Bee Journal. I hope friend Gallup will not be offended because I spoke my mind at the convention. I based my sayings on *figures*. He says in the January number of the American Bee Journal, also in the Iowa Homestead, of January 12th, that his wonderfully prolific queens occupied over four thousand cubic inches with brood. (I suppose she was trying to spread herself from Maine to Oregon.) Brood-comb being only seven-eighths of an inch thick, there must be four thousand

five hundred square inches of comb; and as there are fifty cells to every square inch of comb, giving two hundred and twenty-five thousand cells. As it takes twenty-one days for the worker brood to hatch, by dividing two hundred and twenty-five thousand by twenty-one, it gives us about ten thousand seven hundred and fourteen, the number of eggs that must be laid in each successive day. Now, is this not pretty lively work for a queen to examine each cell and lay nearly eleven thousand eggs in one day? Does she not need some time to eat and rest? *Will she not* take one-half of the time? If she does, she has to lay about two and a half eggs every second. Oh! Gallup, how I would like to have that queen under my glass for a few seconds, to see her turn somersaults. And where do you leave poor Mitchell, who says he can make one hundred swarms from one in a season? Langstroth says twenty thousand bees is a good swarm. Some European writers estimate that from seventy to one hundred thousand eggs are laid in one season, but Gallup's queen lays two hundred and twenty-five thousand eggs in twenty-one days, or ten thousand seven hundred and fourteen in one day, making a large swarm every two days, saying nothing about what he had over four thousand cubic inches. I wish that I was mathematician enough to figure up *to-night* the number of swarms he could produce in one season with such a queen, supposing her daughters to be equally *prolific*. He said in his letter to the Editress of the Homestead, that he expected some would say that he lied. I judged of the truth of his assertions by figures, and will leave the readers to judge for themselves.

As to the amount of honey his colony produced, it leaves a poor chance for figures. *I did say* I did not believe it, and I *do not believe* it yet. If he will convince me that a queen can lay eleven thousand eggs a day for twenty-one days in succession, I will grant that they can gather six hundred pounds in thirty days. As he said in the Homestead, they did gather twenty pounds a day for thirty days in succession, then he had to *stop* to go to *harvesting his grain*, (what a pity he could not have got some poor fellow to have taken his place in the harvest field, and let him stay by his honey, for who knows what a yield he might have taken?) One of his hives lost its queen during this *great yield* of honey, so the product was small. My experience has been, that by taking the queen away just before the honey harvest, they will produce a *larger* yield instead of a smaller one. To substantiate his assertions in regard to his big yield of honey, he goes on in the April number of the American Bee Journal, and gives us an idea (a small one I suppose) of the amount of honey in his section, by comparing the bass-wood trees to "blossoms dipped in liquid honey and hung up to drip." If I had been in his place, I would have made *sap* troughs and placed under the trees, and run the honey right into barrels, and if I couldn't have got barrels, I would have run it into my well and cistern, and if they got full, I would have dug more holes in the ground for the honey. As necessity is

the mother of invention, I suppose he will invent some *dollar machine* to prevent such a waste of honey this coming season. Since his illustrations in the April number, backed by some thirty witnesses, I am almost sorry for what I said at the convention. In the Iowa Homestead of January 12th, he says it would take too much space to give a full description of his hive. So I suppose he is baiting for the dollars of the Novices of Iowa.

Gallup's blowing Grimm doesn't suit me. After stating that he had received numerous letters from parties complaining of Grimm's queens, he goes on to eulogize Mr. Grimm and his queens. I have also received a great many letters, and seen parties personally who have made complaint of Grimm's queens. I myself have received twenty-one tested queens (so he said) from Mr. Grimm, and not one proved to be what I considered pure. And if Mr. Gallup breeds from such queens, no wonder he has to puff them through the papers. Breeders and managers of large apiaries know that a man cannot succeed in keeping his stocks pure with the amount of labor Mr. Grimm reports to the department of agriculture, as used in carrying on his apiary. To affirm that his queens are pure, Gallup refers to one "*Lively*" (a new beginner). Would he, "a new beginner," be considered a good judge of purity? Then he insults every honest apiarian in America by saying to Mr. Grimm that all that is necessary to get high colored queens, is to cross his Italians with black drones, and then breed back to Italians. The brightest colored queens I ever received, I got from Mr. Langstroth, "and they proved the best I ever had." Do you suppose he got them in this way? He says: "Now, Mr. Editor, don't for a moment suppose Mr. Grimm sent these queens to bribe us, for a puff." Why Gallup, you thought you could do enough in this way to pay for the right to use the Langstroth hive, but I couldn't see it.

That hive of Gallup's, of which we have heard so much. What is there of it? Gallup inquires of himself, what have I done that all these donkeys are braying at me so? Why, I only made a hive large enough to hold twenty-six frames, and another large enough to hold thirty-two frames, and another large enough to hold fifty-two frames. Why couldn't some one have thought of that before? Now, says he, I will cook up some hash for them that will beat them all. I will cause the Linden to be so laden with honey, that my hive will make such a large return, that they will all be glad to send in their dollar and stop their braying. And I will rear a queen that will spread herself from Maine to Texas, and lay a swarm of bees every day. Oh! what a great bug am I!

W. H. FURMAN.

Cedar Rapids, Iowa, April 16, 1872.

Nuclei formed from Italian bees, are not as easily discouraged as those from black bees. The latter are much more inclined to desert their hives, to "*Skedadille*."

"It may, however, be asked—if the truth on this highest of sciences has indeed been discovered, how is it that mankind have not hailed it with a burst of enthusiastic welcome? that when it has been now for seven years before the world, it is as yet so little known? What, however, is the reception ever accorded to a great and fundamental truth? Is it not, that at first, it is simply neglected because unrecognized? A few earnest minds, indeed, perceive and embrace it heartily; but the majority brush past it, so to speak, unconscious of its presence. When by degrees it makes way and gains for itself a hearing, it is met by a storm of opposition. Some minds simply dislike what is new; others hate to be disturbed in their ordinary modes of thought; the self love of some is wounded by finding that they know nearly nothing of what has been their life-long study, and they are unwilling to submit to become learners where they have so long been teachers; while others again find their interests or their influence imperilled by the new idea. In the darker ages of the world's history, persecution, imprisonment, or death, was commonly the reward of the discoverer; now it is simply opposition or misrepresentation, when not even calumny. When, at length, its opposers are unable to resist the evidence presented of its truth, they next turn round and say: "Well, granted that it is so, this is not new; it is found in the pages of such or such an author, ancient or modern. And true it is, that those who now in the full light of a truth look back to the earlier ages in search for it, will often detect its first faint glimmerings in the works of those who were utterly unconscious of the scope of the idea that had for a moment flashed across their minds, as quickly disappearing, and leaving the darkness as complete as it had been before. At length, however, the time arrives when the new truth finds its place in the intelligence of the age; it is discussed in philosophical works, set forth in elementary treatises, and finally is adopted as the basis of public instruction, does its discoverer at length meet with the honor due? Rarely, even then. Few know the source whence the idea has been derived. Ask them, and they will answer: "I never thought otherwise; I learned the theory at college; or I derived it from such or such a work."

(Extract from Kate McKean's Preface to her Manual of Social Science, condensed from the writings of H. C. Carey, LL. D.)

Sometimes, as well in summer as winter, the bees take pleasure to play abroad before the hive (specially those that are in good plight) flying in and out, and about, so thick, and so earnestly, as if they were swarming or fighting: when indeed it is only to solace themselves; and this chiefly in warm weather, after they have been long kept in.—BUTLER.

Those that by their lightness you perceive to lack honey, you may now save by feeding, or driving them into others that have store.—BUTLER.

THE AMERICAN BEE JOURNAL.

Washington, May, 1872.

All communications and letters of business should be addressed to

GEO. S. WAGNER,
Office of the American Bee Journal,
WASHINGTON, D. C.

The continued and prompt appearance of the Journal will, we trust, dispel the doubts many have had as to its continuance. No efforts have been spared, or will be spared to make it the most reliable aid to bee-culture in the United States. Beekeepers throughout the country should continue to send us lists of beekeepers in their neighborhood who do not take the Journal, so that it may become known to every beekeeper throughout the land.

Mr. Langstroth's wound is so nearly healed that he expects to be able to return home by the 6th of May.

We have received an article from Mr. J. M. Price, in reply to Mr. Chas. Dadant, which we shall insert in the June number, unless the parties can come to some amicable settlement of their difficulties.

We call special attention to the metal corners of Mr. A. J. Root (Novice). We have seen them, and are of opinion that they will prove a great success.

Accounts of heavy losses from bee dysentery come to us from all sections of our northern and middle States. Thin, late gathered honey souring in the uncapped cells, and long continued cold precluding the bees from a cleansing flight, are supposed to be the main cause of the disease.

CORRECTION.—By an oversight, the following sentence was omitted in the article of Mr. Bingham on "Italian Bees at the Cleveland Convention." It should come in immediately following the amount and product of the Italian bees, and read as follows: "Four thousand six hundred and seventy-five stocks of common or black bees gathered one hundred and fifteen thousand six hundred and seventy-four pounds of surplus honey, or an average of nearly twenty-four pounds per hive."

The day before the death of our beloved editor, the beekeepers of Italy experienced a similar loss. Count Resta, one of the founders, and the president for five years of the association for the promotion of bee-culture in Italy, died on the 16th of February; Mr. Samuel Wagner died on the 17th. To Count Resta,

Italy owes much of its progress in bee-culture, just as to Mr. Wagner and his journal the United States are largely indebted. The American beekeepers share the grief of our Italian friends, as we know they will share ours, for the name of our lamented editor was well known and often cited in the columns of the Italian bee journals.

CH. DADANT.

Hamilton, Illinois, April 10.

Since Dr. Biumhoff left Italy, I have tried in vain to make the importation of Italian bees a paying business. The moths, running honey, dysentery, rough handling, delays in custom houses or depots, and foul air on steamers, have always caused me to lose many queens. In one year my net loss amounted to over \$200. I am receiving a number of letters asking for imported queens, which I cannot furnish; and the need of such queens is generally felt throughout the country to regenerate the breed of Italian bees.

In order to answer this call for Italian bees, I have planned to go myself to Italy, to procure queens that I can sell at a comparatively low price. My traveling expenses will be paid by the care that I shall be able to give to the packing and transportation of the bees.

I will go in July, because at that time I can buy young queens from second swarms which have been raised in large colonies, and which are consequently better than queens raised in nuclei.

The queens will arrive here in September, after as short a journey as possible. The trip will not take more than seventeen days, and perhaps may be shorter. The bees will be sent to purchasers from New York.

I hope the beekeepers of this country will take this opportunity of renovating their stock of Italians, as they will not probably have as good an opportunity for a long time.

CH. DADANT.

Hamilton, Illinois, April 10, 1873.

[For the American Bee Journal.]

Six Months of Disasters.

On page 286 of last volume, I gave my reports of my last year's result. I wintered forty stocks, losing fifteen from dysentery or consequential desertion, leaving me twenty-five to begin with. I brought these up to number fifty-eight. The month of June was very favorable. I had to use the machine every tenth day. In July I had something more than twenty-four hundred pounds of white clover honey. My swarms were all very strong. I extracted nearly all the honey in the beginning of buckwheat blossoms, of which I had several acres near my apiary. September is always a good month here because of the abundance of fall flowers. I kept two barrels of white clover honey in reserve for an emergency. August was dry and the bees gath-

ered nothing. September followed, and the drought and the inactivity of the bees was worse; every farmer was busy at work in burning stumps and clearing land, so that the air was filled with smoke and no bees were seen. October followed with all its disasters and alarm. The whole forest was one sea of fire. The cedar swamps were as dry as cinders. This was the condition of things on the night between the 8th and 9th of October, when at eleven o'clock in the night a tempestuous south wind blew fiercely; the whole forest ignited and became one sea of flame, whereby hundreds of farms with everything desirable were swept away.

I had to fight the fire on every side; several pine stumps were burning near my dwelling house, and when we had no water, we sought to smother the fire with dirt. In this way with great exertions, I preserved my buildings, while all the rest was burned up. Thus we had to work and fight until the middle of October, when rain and relief came. My bees were forgotten and neglected because of the greatest calamity that ever befell a farming community.

The time now was favorable to look after my bees; I found them all alive, but very poor in honey. I diminished the fifty-eight to forty-five. The honey of the twelve was given with the adhering bees to the forty-five, after smoking them. All went well. None were killed. My stocks were all strong. I fed them about eight hundred pounds of the white clover honey I had in reserve. The nights of October were cold; the honey was very thick, so that I had to warm it. Before I was done feeding, November set in. The last week of November I set my bees in the bee-house, forty-five in number. I found at that time that but one-half of the honey was sealed up. On the last day of December I made an examination of the bee-house. I found the bee-house smelling of dysentery. Some hives had already smeared the upper parts of the frames with feces. I set my hives, some with the honey board on, one inch open for ventilation, some with the honey board half off, and the rest off.

One week later I found their condition worse. Those having the honey board on, clustered on the under side of it, and the rest, with honey board off, were on the combs, but uneasy. In this state they reached February. From week to week I found their condition worse; the frames were all smeared as if by black paint; the stench was unsupportable; in handling the frames they were sticky and disgusting. On the 10th of February several hives were dead; each hive containing a peck of bees; the frames were filled with heaps of smeared bees. The remaining bees were dying fast. The 18th of February was a very fine day, the thermometer standing at 44 degrees above zero. I had never used a thermometer in regulating the cleansing flight of my bees. I had learned by experience in letting them go too early, and many times I regretted my hasty zeal.

The snow was one foot deep on the ground. I had read in Moore's Rural New Yorker, page 10, of January, that the temperature should not be less than 60 degrees, that at 50 degrees they

chilled. I had forgotten where I had seen the statement; I thought I had seen it in the Bee Journal, but so it is, the thermometer stood at 45 degrees at 1 o'clock P. M. I found the day so warm and no wind, that I could retain my patience no longer. I went in the bee-house and brought some of my poorest hives out for a cleansing flight. In thirty minutes they were all flying; though weak and falling upon the snow, they were able to rise again. Finding the temperature all right, I set some more out, so that by 3 o'clock they all stood outside. The weather was very favorable, but bees want two hours before the whole are done their cleansing flight; it wants thirty minutes before they are aroused, so it was too late, the mercury began to sink rapidly; thousands upon thousands came out and fell upon the snow, there to find their graves. In this exigency I had to set them in the house again in a worse condition.

All my best hives were set out last. A large number of them were dead on the snow and the rest had not cleansed. The four weak ones had lost but a very small number; they returned and flew beautifully, yet they were very poor. So with tears in my eyes I had to doom them again to pestilence, because of a false statement in a paper which says it wants 60 degrees instead of 45 degrees. Had I set them out at eleven all would have been well and my bees saved. To-day, the 9th of March, they are all dead but six, who will follow the rest, all dwindled away by dysentery. The honey is mostly all grained hard, the bees are in groups all smeared as if painted. The upper part of the frames are sticky and greasy. If any man has a true love for bees, as I have, he will readily imagine my state of feelings at this moment, and when spring smiles upon us, all is desolation to me. Misfortunes never come singly. I had sent fifteen hundred and fifty three pounds of honey to Chicago, and every one knows the dreary calamity that befell that city. If I were at least so happy as Novice, to have some stocks left with which to build up again my apiary I might rejoice one day, but my bees all gone, being located on a very poor rocky farm, my honey unpaid, and above all, being in debt, is as much as one man can bear. Such is fate.

Now, bee brothers, what shall I do with my four hundred empty frames and my hives? Pile them up and hang mourning veils over them? I wish to add that the honey I fed to my bees was among the whitest I ever saw. It was put up in new white oak barrels weighing about seven hundred pounds each; the rest was set in earthen pots and in combs.

This calamity will teach two things, that is, to have a number of double hives non-swarmers for a provision of sealed honey comb frames for emergencies, so as to avoid feeding liquid honey. Had it not been for the forest fire I should have fed in September, and thus it might have been different. If all the hives had the same size frames like mine and Gallup's, it would do immense good; there would be a trade in sealed frame honey, which cannot be done now.

JOSEPH DUFFIELD.

Rousseau P. O., Brown Co., Wisconsin.

[For Wagner's American Bee Journal.]

Color, in Italian Queens.

I had charge for awhile of the only surviving Italian queen of those brought over by Mr. Samuel P. Parsons, of Flushing, Long Island. These bees came in the original hollow logs or gums, which had been carried on the backs of mules over the mountain passes of the Alps. They were purchased in a district where the Italian variety was believed to be in the highest purity. I transferred the only queen that had not perished from the old log to a movable frame hive, a large colony of black bees having been added to the mere handful of Italians. I saw the first queen that hatched from her progeny, she was very beautiful, but from an adjoining cell emerged a very dark sister. This has been my experience with most of the imported queens. The Italians report the same, and as far as I know they are confirmed by the most reliable breeders in Germany, and other parts of Europe. I never had a queen which would "duplicate herself in her queen progeny every time," although I have had some which came very near to doing it, but from such queens if kept for a considerable time, and largely used for queen breeding, I never failed to see, sooner or later, the inevitable dark lady.

Some of the drones from this Parsons' queen were beautifully colored, real golden drones, while others were quite dark. At first we condemned this queen as not pure, although it seemed impossible that she should be otherwise. Experience with other imported queens taught us that the sporting in color of her queen and drone progeny was not exceptional, but the general law, and there has been no better stock imported than the Parsons.

From the darkest queen bred from pure Parsons stock, when purely fertilized, I have raised as brilliant queen drones and workers as from the most highly colored queens. Such queens are undesirable, because they are not so easily seen on the combs, and are in my experience, more likely to mate with black drones, the attention of such drones being probably more attracted to queens which so closely resemble their own variety in color, than to those of a more golden hue.

In one of my importations, I had a small queen so poorly colored that few could see in her any traces of Italian blood. After laying a few worker eggs, she became a drone layer and quickly disappeared. I raised only one queen from her; she was large and handsome, and for many generations my son and myself preferred her stock to any in the apiary.

Long before the Egyptian bees were imported into Europe, I noticed that many of the workers of a certain colony had a peculiar yellow tuft on their corselets, the same that I afterwards recognized in the Egyptian bees first imported into this country by Langstroth & Son. Vogel, who first introduced them into Europe, affirms that he has produced the veritable Italian bee from crosses between the black and Egyptian varie-

ties. What would be more natural, we might say more certain, than that the Greeks who had such extensive intercourse with Egypt, at a time when honey was almost the only sweet that could be largely and cheaply obtained, should bring this bee across the short stretch of the Mediterranean, and thus produce a mixture between it and their own native black bee?

The laws that regulate the reproduction of crosses from different varieties, are often seemingly inexplicable. Long after a variety has seemed to assume a permanently fixed type, it will occasionally "breed back" to some older type. Many years ago, a certain breed of swine (called the *Hyberry*, I think) was introduced into this country; not answering the expectations of breeders, in time it ceased to exist as a distinct variety. An intelligent breeder informed me that many years after, a sow would occasionally produce a litter with one original, veritable, Simon Pure Byberry!

Years ago, I call attention in the *Country Gentleman* to the fact that color in Italian queens was a very "uncertain quantity;" that I had often taken two just hatched queens of equal beauty (they may be taken from the same mother), had put one in a full colony or strong nucleus, and removed the other to a cotton or woollen tube placed in a warm room without any attendant bees, offering it at intervals, honey on the head of a pin. While the first queen retains her beauty, the other will often, in a few days, become quite dark! For other facts, proving that beauty of color in Italian queens is often only "skin deep," I must refer the reader to the original article.

It would seem that the Italian bee has not assumed the same fixed type in all the Italian districts where it is considered to be pure. This is precisely what we might expect, if it is not a distinct variety, but a mere cross between the black and Egyptian races. On some queens we cannot find the spots or dots so distinctly seen on the sides of the abdomens of others. The workers from some districts, have light orange rings, while those from others have rings of a dark chestnut or chocolate color.

Those breeders who have made high color of queens the chief desideratum, and have bred "in and in" very closely to secure it, have generally wound up with a weak and degenerate race, beautiful to look at, but very unprofitable for work. My experience is the same with that of Mr. Grimm, on this point. Some years ago, I found that many of the queens obtained from a celebrated European breeder, were very short lived, could seldom keep up the strength of their colonies, and were as a rule, prematurely superseded by the bees. Some of their queens when fertilized, would drop their eggs anywhere; others would pile them up into a few cells, until these cells looked, on a small scale, like measures nearly filled with grain! Such queens seem to be semi-idiotic, resembling much some degenerate specimens of the royal Bourbon families in Europe. I need hardly say that I quickly got rid of that blood.

L. L. LANGSTROTH.

[For the American Bee Journal.]

Will some of the friends of the science of Apiculture and the Bee Journal, have the kindness to respond to the following through the Journal?

Our bees, 60 colonies, were put into our wintering house, nice and dry, about the middle of November, about two weeks earlier than usual, on account of the severity of the weather.

Our wintering house is constructed as follows: It is 28 feet long, 16 feet wide, and 14 feet high, outside measure; having two walls of solid straw 8 inches thick, and one wall of saw dust 8 inches thick between them, on all sides, and top and bottom; a hall across south end 6 feet wide, made by a 4 inch partition of saw dust, sealed on both sides with boards; a board partition through the bee room, lengthwise, dividing it into two rooms, 6 feet wide, and 20 feet long, 10½ feet high, inside measure, two ventilators, one 4 by 8 inches, reaching from floor out at roof, one 6 by 6 inches, reaching from ceiling overhead of bee room out at roof, 4 shelves, making room for 60 hives, or, if put on both sides, 120 hives in each room. On these shelves we placed our 60 colonies, in double hives, that is double case, leaving summer entrances open about 1 inch long, ¾ inch high, caps off, and honey boards on, but ajar at one end about from ¼ to ½ inch, according to strength of colony. Then a bit of thick rag carpeting over the honey board. The temperature of the house has ranged from 25 to 40 degrees, most of the time stood quite evenly at 36 degrees. Our March was so terrible cold, stormy, windy, snowy and rough, also the first week in April, that we could not remove the bees from their winter quarters until April 5th. At this time only 14 colonies were living, the balance having mostly died, apparently with dysentery; some 5 or 6 perished from want of stores, and, perhaps twice as many more from some cause unknown, as they did not show dysentery. The colonies that survived were all among the weakest colonies put in in the fall; which had been divided and fed with coffee sugar syrup in the fall, some 3 of the strongest colonies showed dampness about mid-winter, and we gave more vent.

Now the question is, did these bees require more vent, or were they too cold? to us it would seem the former. What is the true principle when dampness effects a colony, should they have more vent, or should they be kept warmer? In the warmest summer weather our bees do not suffer from dampness, though all upward vent be stopped.

The long confinement was bad for them, but, we have kept bees confined five months with perfect success in a warm, dry cellar.

We once bought a third swarm, very strong in numbers, but having the hive not more than one-fourth full of comb, and not more than five pounds of honey; we set it in our bee house, a perfectly dark one, covered it with an old carpet, set a quart basin of honey in the hive close up to the bees; we supplied this as often as it became

emptied. During the winter this colony filled its hive with comb, and doubled or thribbled its numbers, and did not lose a single handful of bees. It was confined to the hive over 4½ months, swarmed in early May, and gave us 25 lbs. of box honey from apple blossoms in May. This was in the eastern part of Columbia Co., New York, just on the Massachusetts line.

GILES B. AVERY.

Albany Co., N. Y.

[For the American Bee Journal.]

Communication.

"Why don't they stop that pesky Bee Journal? Here it comes the second year, and I haven't got a single new idea, have you?"

"Well, I think I have."

"What is it?"

"Well, you see, I am making the glass honey boxes described by Mr. Worden, and I consider that article alone worth the price of one year's subscription."

"Well, I declare, they are nice, but where do you find the article?"

"In No. —, Vol. —, one of the papers you have been taking, and no better, perhaps, than most of the others you have taken."

The above is the substance of a conversation with one of your subscribers more than a year ago, reminding me of something I read when a boy, about casting pearls before swine.

The last season here was the worst I ever knew for bees. In my home apiary of 145 stocks of bees, I did not have a single swarm, and got but 1,659 lbs. of honey. I have succeeded in wintering most of them, losing but one out of 145; all except 7 were wintered on their summer stands.

I use the Langstroth hive, with frames 11½ by 9½ inches in the clear, running from front to rear, loose bottoms, and one end to open about ¾ the distance from the top, and movable partitions.

For surplus honey I use glass boxes of various forms and sizes, and also frames 8½ by 5½ inches in the clear, 1½ inches wide, made of two pieces without nails, the top ¼ inch thick; the piece forming the sides and bottom ¾ inch thick, and cut nearly through with a V in two places for the bottom corners where they are bent at right angles, and fastened to the top by gluing them in a groove. A frame this size weighs 2 ounces, and contains 2½ to 3 lbs. of honey, and is the most salable form I have ever found.

I know not whether the proceedings of the annual meeting of the Beekeeper's Association of Central Illinois have been sent to you for publication, if not, I would say that the *pesky* Bee Journal was commended above all others.

Enclosed find the needful for my own and two new subscribers.

Yours truly,

J. L. WOLCOTT.

Bloomington, March 1, 1872.

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VII.

JUNE, 1872.

No. 12.

Letters of F. Huber, Continued.

OUCHY, November 8, 1800.

I thank you, sir, for the many kind expressions contained in your letter. I feel fully the worth of your confidence and hope to merit it, but in matters of rural economy, as well as in others, we must rely upon experience, and therefore I spoke to you of Mr. Gélieu, for whose character and knowledge I have a profound respect, and who has not been so devoted as I have to the theory. But since you are determined to have my opinions I will talk to you about bees as much as you wish, on condition only that you attach no more value to what I say than I do.

Most of the questions you ask me are yet to be solved: We will give them attention in order, and I will give you my ideas (if any occur to me), on the means to be employed to solve them.

I am highly pleased, sir, to learn that you do not entrust the care of your bees to others. The experiments you have made prove that you are fully qualified to handle them with impunity. You are the first to confirm what I have stated. That the only requisite is gentleness, and the firm conviction that the sting is only a formidable weapon to those who treat them roughly, and who make awkward blunders through fear. It also gives me great pleasure to learn that you are prosecuting investigations that I have not been able to pursue. I will assuredly contribute to your success by every means in my power.

The fact that you have noticed is very extraordinary; that queen found dying near your hives and not recognized by any of your bees, might she not have been a stranger queen abandoned, and who came to seek the shelter and the subjects she had lost?

Queens cease laying when they approach the end of their lives; their hive decreases in population daily, and the colony reduced at last to a very small number,* leaves the queen, and never returns to the natal hive; the workers attracted

to happier homes, enter, and are sometimes well received; but the fate of the queen is very different. The bees of the hive she attempts to enter envelope her as you have seen, hug her in their midst, and exhaust her and cast her on the ground, when hunger or the hugging she has received renders her incapable of renewing the attempt.

The beginning of this account is only conjectural. I have never been so fortunate as to be able to follow a queen from her birth to her natural death; neither do I yet know what is the length of the life of a queen.* Probably, you, sir, will be able to tell us that.

This inquiry is useful as well as curious, and I commend it to you. If I have not seen queens die of old age in my own hives, I have often been visited by strange ones that came from I know not where, either alone or poorly accompanied, at the beginning or end of autumn; most frequently these old queens have been found dead at the foot of my hives; at other times I have found them alive on some neighboring stake, having about them fifty or more of their workers. I have seen them pass several days in the open air, and as they also remained there during the night, I may conclude they had no home, and that this small number of workers were all that remained of the family they had presided over.

Only once have we seen the attempt of an aged queen to enter one of my hives succeed. She at first offered herself to others who gave her a poor reception, because they had a queen; but she entered without any difficulty a hive that had lost their queen. Her dark color and the slenderness of her body indicated old age, of which her sterility was a still surer indication. She did not lay an egg in the hive that adopted her at the latter part of autumn, and she died at the end of winter without having laid a single egg, and as queens begin laying the latter part of January, the old age of this one was proven by her sterility. I am more disposed to believe that the queen found at the foot of your hives was a stranger to them, than that she went away from one of those you operated upon October 14th; which even if wounded or dying would not have been unrecognized.

* Huber is speaking of black bees. In my experience the Italians almost always supersede their queen, when her fertility becomes seriously impaired, by rearing another from her worker brood.

L. L. L.

* Huber's fidelity to truth is everywhere apparent. He is never ashamed to confess his ignorance.

L. L. L.

The queen cell found in this hive proves that it had been queenless for some days. Did you discover it on the 14th of October, or later? This circumstance may help to decide the question. The agitation which you noticed would lead one to think that this hive had just lost its queen, and in this case the one you offered, it was not probably the queen it had lost.

To be able to explain a fact in natural history, one must know well the accompanying circumstances, without which any decision is too hazardous. This calls to mind a trait in the fidelity of bees that I must relate to you.

One day I took from a colony a virgin queen that I had given it, to see how the workers would behave under the circumstances. As there was no brood in the hive the loss of the queen was irreparable. I was curious to see what they would do, but I could not perceive any agitation among them, nor anything that led me to suspect that they regretted her loss, or even knew of her absence. I was about to conclude that their indifference arose from her sterility and I found it quite natural that they should have no affection for a mother that was of no use to them; but this human reasoning was not the reasoning of the bees, and I was soon undeceived.

The next day I found the queen numb, from cold or hunger, in the box where I had put her. I therefore placed her in the hive; as soon as they perceived her on the table where she was lying, I saw a few workers range themselves around her, caress her, fawn over her with their proboscis, offer her honey which she did not take, and brush her with their feet; all this was useless; she was dead.

Their caré did not diminish from ten o'clock in the morning to eight o'clock in the evening; I then took her away, and without any object in view, placed her on the window sill of my study, in which the hive was. Returning there at ten o'clock in the morning, I was much surprised to find my dead queen surrounded by bees, circling about her in the way you know, and giving to her dead body their customary honor.

The night was not warm, nevertheless the dead queen was not abandoned, and on the morning I found her faithful guard lavishing upon her the same care they had rendered during her life.

I once more returned her body to the hive and at the same time introduced a young fertile queen, not doubting but that the bees would instantly appreciate the value of my gift, and would prefer the mother I had given them to the dead virgin queen from whom they could expect nothing; another reasoning, also human and quite as pitiable as the preceding. The bees who do not reason, and who perhaps are none the worse for it, treated the strange queen very rudely; they held her in the middle of a mass of bees so that she could not move, and kept her thus over eighteen hours. At this stage the knot of bees reached the entrance of the hive; it was larger than a nut; the bees that formed it imparted to it such a movement, that we saw it roll like a ball which it resembled in form, to the edge of the stand on which the hive rested. Arrived there, a continuation of the same move-

ment caused it to fall on the floor without altering its form; we extricated* the queen just as you did; she had not received a sting but she was very weak; we succeeded in restoring her by returning her to her natal hive.

The bees I have been speaking to you of obstinately cared for the dead body of their queen during two days and a half; I then took her away and gave them young larvæ that they nursed, and from which they procured another queen.

From this and other similar examples, I am inclined to believe the second supposition of no value, and that the queen which was not received by any of your hives was certainly a stranger to them all.

I have dispensed with the hinges of the leaf hive with regret; it is very convenient to open the hive like a book, but when it comes to shutting it up, there is an objection that compelled me to abandon this way. In closing the frames the bees get in the angle formed by two frames, and as the angle grows smaller, one unavoidably crushes those which persist in remaining in this dangerous situation. Burnens, with all his skill, could not avoid often killing them in this way, and it is he who asked me to get rid of the hinges and proved the necessity of it.†

You understand, sir, that you run no risk at all of crushing the bees when the frames are not fastened to each other—you can bring them close together without forming any angle, and can give the bees time to dispose of themselves on the faces of the two combs.‡

The invention you have made for uniting four frames, appears to me excellent; but the leaf hive must have a cover to protect it from changes of wet and dry, which will after a time warp the wood of the frames. It is not then enough, as I have formerly said, to bind together the hive with a cord or twine; such a band is too weak, and does not prevent the hive from bursting open. I might have foreseen this, but can one think of everything?

You will receive in a few days, sir, a small box containing a model of a hive and a little memoir, which I thought to add to this letter, &c. But as the rest is not ready, I cannot longer de-

* I have frequently lost a queen by attempting to extricate her—the bees becoming so excited as to sting her. Taught by sad experience, I no longer attempt to separate the bees, but put the ball into a vessel of cold water; they will then very speedily uncluster, and the queen can be safely secured.

L. L. L.

† The generous nature of Huber is no where more apparent, than in his readiness to give to every one full credit for valuable observations or suggestions, "*Suam cuique*"—his own, to each one, seems to have been with him a sacred maxim.

L. L. L.

‡ In *Bevan*, on the Honey Bee, 1838, p. 108, may be found *Dunbar's* improved Huber hive. The frames are held together on the front "by shifting butt hinges, and at the back by hooks and eyes." To prevent the bees from being crushed, in the manner described by Huber, *Dunbar* "ploughed out the edges of the frames through their whole extent, to within an eighth of an inch of their outside."

L. L. L.

lay to reply to yours, and to assure you of my devotion,

I have the honor to be

Yours, very respectfully,
FR. HUBER.

[For Wagner's American Bee Journal.]

Are Artificial Queens Inferior to Natural Queens?

The experience of Mr. L. Bevan Fox, detailed in the article republished in the April No. of the American Bee Journal, from the London Horticultural Journal, is precisely the same with our own. As the subject is one of the greatest importance, both to breeders and purchasers of Italian bees, we shall give our views upon it at some length.*

In 1869, having an unusual number of natural swarms, we determined to secure for most of our stocks, queens bred from what we shall call *swarming queen cells*; so that we could advertise such queens for sale, if we found by experience that they were better than queens bred from non-swarming queen cells. The next season being a poor one, both for swarms and honey, the larger part of our stocks retained these queens, and they remained in our apiary, until in 1871 we superseded them by young queens. Having thus tested such queens for three seasons, and on a large scale, we could not see in them any superiority to queens reared *under favorable circumstances*, from non-swarming queen cells. If any such superiority had existed, we think that it could not have escaped our notice, as we were not influenced by any preconceived theories, and might have sold these queens to better advantage, if we could only have guaranteed their superiority.

We shall now explain exactly what we mean by *favorable circumstances*, so that all our readers may know how to secure them; and thus be able to breed queens from non-swarming, fully equal to those bred from swarming queen cells.†

By favorable circumstances, we mean: 1st. *The proper season of the year.* We have had a

* In 1849 we made our first observing hive, and witnessed, almost hourly, all the steps in the process of queen raising from worker brood. So few persons in this country then believed in the possibility of bees producing queens from worker larvae, that we at one time seriously thought of having the facts *certified* to by Rev. Albert Barnes, and other distinguished Philadelphians, who were eye witnesses to them! How strangely such reminiscences must strike the new generation of beekeepers, to whom, by the aid of movable frames, all the steps in the process of queen rearing are now so familiar.

† If the terms Natural and Artificial queens are used merely to designate queens bred from swarming or non-swarming queen cells, we do not object to them—but we wholly object to using the word *artificial* to designate some supposed deviation from the laws of Nature, which secures an unnatural and inferior kind of queens. The rearing of queens when bees do not intend to swarm, either to supply the loss of a queen from accident or disease, or to supersede one which is superannuated, or not sufficiently prolific, is plainly a *natural* process.

queen reared in a full stock in the month of January, when the mercury during the time of her incubation, was once below zero! but while this is possible, the right time for rearing queens in nuclei is, when the season is far enough advanced for the bees to gather freely both pollen and honey, and when drones are beginning to appear, or are nearly matured. From this time until late in September, I have ordinarily found in the latitude of 40 degrees no difficulty whatever in rearing choice queens. 2d. *Abundance of worker bees.* If the nuclei are so small as to become discouraged, the queens being often poorly nourished will be shy breeders and short lived. Not only should there be a generous allowance of bees, but a *large* proportion of them should be *young bees*, or the best results cannot always be secured. 3d. *Abundance of pollen.* If this is deficient the queens not being well fed, will be undersized, or otherwise defective.

We shall here call attention to a marked difference almost always found in the supply of royal jelly given to natural and artificial queens. While the larvae of the swarming queen cells are usually so *over* supplied that a considerable quantity remains in the cell after the queen has emerged, there is seldom any excess found in the non-swarming cells. Those who have so confidently pronounced all queens reared in non-swarming cells inferior if not worthless, will probably think that these facts prove that the swarming queen cells are well provisioned, while the others are not. But "*enough* is as good as a *feast*," and enough the non-swarming cells will usually be sure to have, if the breeder understands his business. Why the bees provide an excess for one kind and not for another, may not be apparent, but the former, although "papped, capped and napped in the lap of prodigality," having been "born with a silver"—or judging from the color of the royal surplus—"with a *golden spoon* in their mouths," are not a whit better fitted for the exigencies of life than their seemingly less favored sisters.

4th. *Abundance of honey.* It is desirable that the queen-rearing nuclei should not only be well provisioned, but if natural supplies are not easily procured by them, they ought to be regularly fed in order to keep them at all times in *good heart*. They should not only know nothing of actual scarcity, but should by generous feeding, be saved from even the apprehension of it, and thus made to feel confident in their resources, and ready for all emergencies.

Every experienced breeder knows that he can always have queen cells so largely in excess of his wants, that he need save only such as are perfectly developed. Such cells are usually of good size, and *roughened* all over with ornamentations, as though for some reason the bees felt a special interest in their inmates, while such as are undersized, *smooth*, and blunt instead of having the usual tapering proportions, are much more likely to produce inferior queens.

Under the most favorable circumstances some queens are produced which are so small, or so poorly developed, that the expert destroys them as soon as seen. He who cannot form a pretty accurate judgment from seeing a just hatched

queen, whether he should preserve or destroy her, is unfit for the business of breeding queens for sale.

L. L. LANGSTROTH.

Dried Cow Dung for Fumigating Bees.

Nearly two thousand years ago, Columella recommended the dried dung of cattle as the best thing for fumigating bees. Learning, soon after importing the Egyptian bees, that the Egyptians made use of the smoke from this substance in all their operations upon their irascible bees, we began to use it largely in our apiary. The smoke from burning cow dung, while very penetrating, is not offensive. It can be blown so as to diffuse itself very quickly through the hive, and yet it does not seem to irritate the bees, and our own experience confirms the very strong commendations of Columella. Wherever rotten wood is not easily procured, it will be found of very great value.

When thoroughly dried, it will burn slowly but steadily; and by slightly dampening the outside after lighting it, a piece not larger than the hand may often be made to last for several hours. It does not always ignite as readily as one could wish. Dr. E. Parmley has obviated this difficulty by dipping one corner in coal oil. The odor is so little offensive that it may be used instead of pastiles in the sick room, a little sugar being sprinkled upon it while burning. Those who know how universally the dung of buffaloes, called *buffalo chips*, is used for cooking purposes on our great plains, will feel no prejudices against this seemingly uncleanly substance. We shall call it *buffalo chips*.

L. L. LANGSTROTH.

Uses of Wool in the Apiary.

For the last four years we have used *wool* quite largely for various purposes in our apiary. We use nothing else for stopping up our queen cages, rolling it for this purpose into a tight wad. The bees cannot gnaw it away, and seldom propolise it. We shut up all our nuclei, when first formed, with wool. It can be crowded into place in a moment, admits air, and is easily removed. If we wish for any purpose to shut up a hive, we use wool. In the working season, we keep one "pocket full of wool," and know nothing of the vexations we experienced when using wire-cloth. Occasionally a few bees are caught in the fibers of the wool, but they are for the most part very shy of it, and are quite indisposed to commit *felo de se*, by hanging themselves in its meshes. Robbers will very quickly retreat from a hive well woolled. If we use the words *wool* and *unwool* a hive or nucleus, instead of to shut up or open the entrance, our readers will understand what we mean.

L. L. LANGSTROTH.

[For Wagner's American Bee Journal.]

Controlling Fertilization.

The controversy on this subject waxes hotter and hotter, and Mr. W. H. Furman seems determined to secure the services of the most prominent parties who have claimed success, if money can do it. We confess that all our attempts to have queens fertilized in confinement have thus far been complete failures. We experimented upon a large number on the plan detailed by us in the American Bee Journal for May, 1871. We dissected the queens and found that not a single one had been fertilized.

For the benefit of our readers, we explain how we dissect queens. Holding the queen firmly by her head and thorax with the left hand, we pull away the abdomen with the right, quickly crushing her head to put her out of pain. We then press gently upon the lower part of the abdomen until the *spermatheca* appears, which we place upon our thumb nail. If the queen has not been fertilized this organ is rather undersized and seems to be only partially distended, looking somewhat like a small white bead; when pressed it discharges a little fluid as clear as water. If the queen has been fertilized, the sac is larger, is more distended, and has a cream like color—when pressed it discharges a milky fluid, like that which fills the organs of the drones.

Three years ago we devised a plan for controlling fertilization, which we communicated to Mr. Samuel Wagner, Dr. Elrick Parmley, Mr. W. W. Carey and some others. The plan in substance, was to use a fertilizing house or apartment with one window opening fully to the sun's ray at about 2 P. M.—to keep in it one good stock well supplied with choice drones, and to place in it the nuclei, having young queens to be fertilized. The window was to have wire cloth slides* with meshes fine enough to allow free passage to the workers only. For a large part of the day, the window to be left wholly open; but during the flight of the drones the wire slide to be opened and shut at intervals until the drones become accustomed to have their flight to the window interrupted, both when leaving the hive and when returning to it—the workers also learning the lesson of flying either through the open window or the wire cloth. This window was to be placed *high* up, and the stock and nuclei low down, and as far as possible from the window. The drones and workers from the full stock were to be properly educated before the nuclei were introduced. We hoped that in this way, when the queens took their wedding flight, they would fly about the room and mate with drones that did not feel themselves placed in a strange, and therefore an unnatural condition. We founded our hopes of success on the fact that the intercourse of queen and drone (see

* Instead of the wire cloth, panes of glass might be set in a sash, so that at the top of each glass there would be the 5-32 opening. The window might be made large enough to secure any desirable amount of light.

American Bee Journal, vol. 1, for 1861) was witnessed under the following circumstances: In Mr. S. B. Parson's apiary at Flushing, Messrs. William W. Cary and R. C. Otis saw a young Italian queen leave a small nucleus for fertilization. She returned without success, and as she left a second time, they closed the entrance to be more certain of seeing her condition when she returned. A few drones belonging to the nucleus finding their entrance obstructed, took wing and hovered near the box. The returning queen mated with one of them, which dropped dead instantly, and was picked up and preserved in alcohol. This occurrence proved that fertilization did not necessarily take place high in the air. A return of our old malady prevented us from testing this plan, which seems to us more feasible than any hitherto communicated to the public.

It will be observed that we do not share Mr. William R. King's fear of "the fiery workers" interfering with the natural propensities of the drones, for we have seen no evidence of any such fear, until about the time when the workers are intent on driving them from the hive. Up to this time they treat them with great affection, not only cherishing them in the larvæ state, but being always willing to give them honey, when they solicit it.

If this plan should prove a success, the nuclei with their fertilized queens could be removed and others set in their places, so that it would be necessary to keep only a small number in the fertilizing house at any one time.

L. L. LANGSTROTH.

Introducing Queens.

M. M. Mahin, in the March No. of the American Bee Journal, gives his way of introducing queens. He says he has introduced one with peppermint water, but would not advise the plan for valuable queens.

I wish to inform Mr. Mahin that we have been introducing queens in that way for the last four years. It is highly useful for imported queens, as it would be very dangerous to cage such queens for any considerable time, after they have been traveling for from twenty-five to thirty-five days.

My father found this method described on p. 16, vol. 4th, of American Bee Journal. He was so confident of its safety that he at once used it for introducing some imported queens. There was so much peppermint in the original recipe that some of the stocks remained in a state of feverish excitement for several days. We prepare it as follows: In a pint of sugared water, put a teaspoonful of essence of peppermint; open the hive, kill the queen, and sprinkle both sides of the comb, bees and all, with the preparation—then dip the new queen into it and place her on one of the combs. The evening is the safest time to introduce, when almost all the bees are back from the fields. We use a chicken's wing for sprinkling.

We have never lost a queen introduced in this

way, although we have used it with hundreds. When we expect imported queens to arrive, we cage beforehand a number of queens, so that we can at once introduce the imported queens. We have introduced as many as fifteen imported queens, within an hour after their arrival.

C. P. DADANT.

Hamilton, Illinois.

[For the American Bee Journal.]

Condensing Swarms.

We have said considerable in the American Bee Journal about keeping bees condensed, or in a compact mass, in order to have them work to advantage, raise brood, build comb, evaporate their honey, &c., but as there are a large number of new subscribers we think it will do no harm to give our ideas on that subject once more, and especially about the management of the extractor.

A friend of ours has lost several stocks of bees this winter and his nucleus swarms. We saw these bees in December last, and could have informed him that they would starve to death before spring, just as well then as we could do after they were actually dead. To begin with his nuclei; he extracted their honey late in the season, and the consequence was they were filled again and sealed up thin, watery honey. They had abundance if it had been properly evaporated, but that not being the case, they were never quiet, and consequently consumed all their stores and starved to death in February. Now it is my candid opinion that if the same honey had been extracted and condensed so as to have one-third the amount, and then fed back to them, they would have had abundance and would have remained perfectly quiet all winter. It is astonishing what a small amount of good honey of the right consistency it takes to winter a stock of bees. Now if his stocks that starved had been condensed by the use of the division board to six or eight combs, they would have evaporated their honey so as to have had abundance to winter on. This condensing must be attended to while the bees are gathering their stores. In using the extractor, we must be very careful not to use it too late in the season; yet honey stored late in the season, if the stock is well managed is just as good for wintering purposes as any. To illustrate this, honey stored in June is always good for wintering, because the weather is warm, and the bees are raising large quantities of brood and the stock is strong in numbers, consequently they get up heat enough to evaporate their honey, and one pound of this honey will go farther towards wintering a stock of bees than three pounds stored late in the fall in the same sized hive. Why? Because the weather being cool, they are rearing but little brood and the stock has only about one-half the number it had in June or July. But condense this stock to one-half the number of combs and we get a good quality of honey for wintering or winter food. Take one of our nuclei with three combs, keep it crowded with bees of the

proper age, and they will store as good quality of honey for winter food as the largest stock in the apiary, and when properly ventilated in a special repository will not consume one particle more honey in proportion to their numbers than the large stock. We are not writing theory but actual practice. We have wintered less than a pint of bees and they scarcely stirred all winter. Nuclei and spare queens can be wintered just as successfully as full stocks. If you do not know how to manage them so they can make their own honey, then take combs from standard stocks containing good honey and the necessary amount of empty cells for them to cluster in. Their honey should be above them instead of at the side of the cluster. Six or eight of our combs with empty cells below and honey above will winter our largest stock in the cellar, if of the right quality; while 30 filled with improperly evaporated honey is not sufficient.

In extracting honey from our large hives, we ceased to extract from the end the queen was in as soon as the great flush of honey was over. It is so constructed that as soon as the great breeding is over and the stock decreases in numbers, the bees condense themselves or withdraw to one end. Now close the other entrance and the animal heat is still concentrated the same as in a single hive, yet they have full access to the surplus end as long as the honey harvest lasts, and we can keep extracting from that end without disturbing the other. Not so with a two story hive, for we must take off the upper story in order to condense the bees to the lower story, as soon as the flush of honey is over, or we may get improperly evaporated honey in the brooding apartment for winter food. New beginners must be very cautious about this. We have had a strong swarm of bees come out as late as the 20th of September, and by condensing them in our hive by the use of the division board, they stored an excellent quality of honey for winter, and wintered as well as any stock in our apiary; whereas if we had not condensed them we should in all probability have lost them by their storing improperly evaporated honey. We got bit some 20 years ago by not understanding this, and a burned child is careful of going too near the fire. In a cool, wet season we should not hesitate to extract and evaporate by heat and return to the bees for winter food.

E. GALLUP.

[For Wagner's American Bee Journal]

Italianizing Black Bees.

MR. EDITOR:—I will give to the American Bee Journal my mode of Italianizing black bees and giving them all good, natural queens of the best grade.

First. I get my Italian stock in a good strong condition. About the last of May or first of June have a good natural swarm to come off. Two or three days after the swarm has come off, examine the hive and see how many queen cells you have got.

Seven or eight days after the swarm comes off, make as many artificial swarms as you have queen cells for, cut out your queen cells and put one in each hive, that you have taken a swarm from. They will hatch in two or three days and your hive will have a good natural queen. This I have found to be the best way of Italianizing black stocks. I have on several occasions taken queen cells ready to hatch and put them on the lighting board of a black stand which had their queen, and in a few minutes it would come out of the cell, and the bees would invariably treat her well, and the bees either killed the black queen, or the young queen killed the black queen. I have Italianized several stands of black bees in that way. I have found on a trial of three years, that artificial queens are as a rule but of very little account. Out of 20 queens raised artificially in 1870, 12 died before the first of May, 1871, the balance died during the swarming season.

I have found to my satisfaction that good natural queens are the only safe and reliable ones.

R. MILLER.

Malugin's Grove, Ill.

[For the American Bee Journal.]

The Eureka Hive.

In the American Bee Journal for April, 1872, p. 240, I find a communication signed D. C. Hunt, North Tunbridge, Vermont. He says: "I told him I wished to see his much lauded non-swarming hive about which I had seen so much figuring to prove it the best of all hives made." He had five old stocks in the spring; but as the season advanced they all cast swarms! *Facts.* I had but four colonies in my Eureka hives in the spring of 1867. Three of them were native bees, and one of them Italian. Two of the native colonies gave no swarm; one of these gave 174 pounds of surplus honey, the other 124 pounds.

The Italian colony gave 46 pounds. Its first swarm gave 56½ pounds, second swarm 40 pounds, amounting to 106½ pounds. The other native colony gave 36½ pound. Its first swarm gave 61 pounds; amount from both colony and first swarm, 97½ pounds. From the two that gave no swarms, 298 pounds. Product of the two that swarmed, four new swarms and 204 pounds of honey. It will be seen from the above how much credit is due to his assertions that I had five colonies in the spring, and that they all cast swarms. He says, "I noticed however, to my surprise, that he was appropriating Mr. Langstroth's invention without due credit, and evidently with a disposition to detract from his claims as inventor and patentee." I believe Mr. Langstroth's liberality in giving to preachers of the Gospel the privilege of using his patent without charge is generally known. Having been in the ministry some fifty-six years, I can hardly see how the use of movable comb frames is "use without due credit," or evinces "a dis-

position to detract from his claims as inventor and patentee."

He says "Mr. William Stratton, of West Troy, whom I visited the same day, gave Mr. Hazen credit of having a good hive for box honey. But though he had one hundred and forty stocks in his apiary, I did not see one of Mr. Hazen's hives among them." "Mr. Hazen's hive, (he then called it the Eureka) is nothing more in effect than a common box hive, about the size and shape of one used and recommended by Mr. Quinby, with boxes applied to the top and sides.

Mr. W. M. Stratton, to whom he refers, believes it to possess advantages over any hive he has ever seen, in the following particulars: 1st. For approaching the sheets of comb at both sides of the hive and removing them latterally, if movable frames are used.

2d. From the number and arrangement of the surplus boxes securing the greatest amount of surplus honey.

3d. For perfect security of warmth for wintering upon the stand.

4th. From the great simplicity of its construction.

WM. M. STRATTON.

Mr. Quinby writes as follows:

ST. JOHNSVILLE, N. Y., Sept. 7, 1868.

"I have visited Mr. Hazen's apiary and examined his Eureka Hive. In the arrangement of the large number of surplus boxes in close proximity to the main body of the hive, I think it greatly superior to any patent hive with which I am acquainted. And if he would apply the movable combs to which it is adapted, and a device to prevent swarms leaving, the principle would be nearer what I want in a bee hive, than any I ever saw."

M. QUINBY.

I wish to add, I am not aware of ever expressing an opinion unfavorable to the rights of Mr. Langstroth in my life, as intimated by Mr. Hunt. I have written that with the Eureka Hive, bars or frames may be used at the pleasure of the operator. I have no patent claim covering either. I think one or the other should be used. For the use of the mel-extractor movable frames are a necessity. If one keeps but a small number of colonies and does not manipulate them, but simply hives them when they swarm, and puts on and removes the boxes when required, bars are probably quite as good as frames.

JASPER HAZEN.

Albany, N. Y., April 16, 1872.

[For the American Bee Journal.]

Malt as Bee Food.

As the season is approaching for feeding bees, I will relate a fact in that connection that may be of some benefit to beekeepers:

In the spring of 1870 I had occasion to visit a distillery, as a part of my duties as United States Assistant Assessor, and knowing that rye was frequently made use of for the purpose of distil-

lation, I applied to the proprietor for a small quantity to feed my bees on. He informed me that he had no rye, but he could furnish me with some ground malted barley which he thought would be preferable, as it contained more saccharine matter. I accepted the offer, and as the weather was pleasant and the bees all out hunting for something to do, I immediately procured a large cheese box top and supplied them with a quart placed convenient to the apiary, and in a few minutes it had disappeared, and in the course of a few hours they had consumed a half gallon more. I had never seen anything to equal it before. They would dive into the flour and roll and tumble until they were filled with it, legs, head, and everything about them, and then crawl to some convenient place, and work it into balls and return to their hives. It reminded me more of a flock of wild pigeons fluttering in water to drink. They will continue to eat it until the fruit blossoms. They will not notice the rye flour so long as there is any barley within their reach.

G. B. LONG.

Hopkinson, Ky.

A Bit of Experience.

MR. EDITOR:—The season of 1871 proved to be a poor one in this vicinity. The white clover yielded an ordinary amount of honey, but the Linden bloom was injured by the late frost, and yielded but a small amount of honey; then followed a month in which the bees gathered nothing. About the 20th of August, what we call the English Smartweed began yielding honey; this plant I consider equal to buckwheat. From this plant my bees obtained their winter supply. The continued dry weather prevented the bees from raising their fall brood, thus leaving the stocks in a critical condition as regards the young bees. I determined to stimulate them up to brooding in order to have them in a proper condition for wintering. Therefore, I commenced feeding them with the poorest quality of honey, making one part water. I fed them thus one week. Some refused to raise brood. I find that every one of those colonies are dead that did not use all the honey.

Out of sixty-eight colonies I have thirty-five good strong colonies. As to the cause of them dying, I attribute it, in a very great degree to the honey. Had I extracted all the unsealed honey I believe they would not all have died, and had I fed the best quality of honey there would have been better results—thus we are all learning dear lessons never to be forgotten.

J. N. WALTER.

Winchester, Van Buren Co., Iowa.

The mortality among bees has been very great this last winter. Many colonies have starved; many have frozen from excessive cold and weakened numbers, and thousands have died from dysentery.

■ [For the American Bee Journal.]

Rambling Notes.

MR. EDITOR:—Having some leisure, I drop you a few lines from the northwest. It has been a hard winter on bees. So far as I can learn I think that one-half or more of the bees in the west have died, or become so reduced as to be almost worthless so far as surplus honey is concerned.

The majority died apparently of what is known as dysentery. Tall hives have not wintered any better than shallow ones. Some think the losses were occasioned by the long cold winter; others that it was the poor quality of the late honey, and still others that breeding was stopped so early last fall that the bees were too old to winter well. I think the trouble is in all three. Where bees have had care, there has not been much difference in the loss between those wintered out of doors, and those wintered in cellars or buildings made especially for wintering bees.

If there was any difference, those in the cellar fared worst. We have had a very long cold winter. The thermometer has not went as low as some other winters, but it has been very steady cold.

Why is it, some of the most practical beekeepers do not write more for the Journal? Is it as some large beekeepers say, if they write others can profit by their experience, and the business will soon be overdone, and they will not get a remunerative price for their honey? Others do not believe in writing for the Journal without getting large pay for what they write. Others do not believe in writing for the Journal, and then have to pay for their own articles, as they think they would rather get all the information from others and give nothing in return.

Now as to the hive question, it looks to me as if there was a great deal more fuss than there is any necessity for.

If Mr. Langstroth's patent is not worth anything as they claim, what is any of their patents worth? If there is not any patent or practical movable frames, then any one of common sense can make a better hive for practical purposes than 99% of the so called patent hives, especially if they are beekeepers.

I will venture to say that there is not one in a hundred who buys a so-called patent hive or individual right, that at the time of purchase knows what the patent covers, and besides some of the patent hive men use the names of practical bee men, as a recommendation of their hives, without the knowledge or consent of the parties. Others will go to some practical beekeeper and leave a hive with him on trial, or if he does not want it, the bee hive vendor will ask permission to set it in the yard until he comes back, as he has only one left in his wagon and he is going after another load, and does not want to haul it around so much. If successful in leaving a hive, he will start off on some other course, and will report that Mr. so and so, giving the name of the man with whom he left the hive, has got one of these hives in his yard, and he thinks it just the hive. In one

case I knew of a swindler offering a practical beekeeper \$50, to let him set one of his hives in his yard for a short time, but was refused. His hive stood on three legs, with the greatest invention of the age, the moth trap warranted to catch all the larva of the moth in the hive, and let them fall into a tin box and break their necks.

The hive was nothing more than a box hive for two swarms, with a box on top, and side for surplus honey, with an alighting board on hinges, so as to close up every evening and not let any moth get in the hive. You could make, if necessary, the hen roost attachment for closing the hive against the moth.

Then there are some parties in the west who will adopt a common sense independent movable frame hive and recommend it to the public as the best hive in use, but are willing to sell their influence for a mess of pottage, to enable them to gull the unsuspecting public, and to make the sommersault appear all right, they will use a few of the last recommended hives; but go to their apiary in a few years and ask them to show you the practical working of the movable frame hive, and they will almost invariably go to the first hives, or the Langstroth style of frames, or if any other style of frames, one, that has not had a full stock of bees in it over three months, as the others are generally glued shut with propolis, so much as not to be convenient to handle.

I would like to talk a little about the marketing of honey in the Chicago market. Would it not be better for the beekeepers of the northwest to unite and hire some practical man or beekeeper that understands the value of the different grades of honey, to go to Chicago and sell their products for a remunerative price, than to let the commission men and honey houses control the market and dictate the terms. Moreover, by this plan the consumer would get a pure article and not pay full price for a doctored article. To illustrate, you may go to Chicago with a lot of honey; take a sample of nice box honey around among the dealers, the best price they will offer you is 21 cts. You sell your honey, and before leaving the City you see some one with a box of your honey, and ask what they paid for it, the answer will be generally somewhere between 40 and 60 cts. per lb., and if you have extracted honey, the reply generally is the market is over stocked and we do not wish any without you are willing to sell at from 8 to 10 cts. per lb. NORTHWEST.

HOW TO CLARIFY HONEY.—A good way to clarify honey is to add two pounds of a mixture of equal parts of honey and water, one drachm of carbonate of magnesia. After shaking occasionally during a couple of hours, the residue is allowed to settle and the whole filtered, when a beautiful clear filtrate is obtained, which may be evaporated in a water bath to the proper consistency. The only drawback to this method is the length of time it takes to filter the solution; and this may be much abbreviated by taking the same amount of white clay instead of magnesia, when a nearly equally good article is obtained in much less time.—[Druggists' Circular.]

[For the American Bee Journal.]

A Large Number of Queen Cells.

In August, 1870, I removed a hybrid queen from a full stock and introduced an Italian. On the twenty-second or twenty-third day after, on opening the hive I found it literally stocked full of queen cells.

A German friend being present suggested we count them. I cut out and removed fifty-four queen cells. What was a little remarkable to me was, they were every one sealed. A majority of them were very large, but some were small. They were on the sides, bottom and edge of the combs. Will some friend tell me why so many, and whether it is common? I ought to say, perhaps, that before removing the hybrid queen—a very prolific one—they had attempted several times to swarm, but were prevented by a Quinby Queen Yard.

Bees seem to be wintering well in this section, so far as I hear. We have had cold weather since December 1st, so that those out of doors, have not been able to fly.

A. C. MANWELL.

Ripon, Wis.

[For the American Bee Journal.]

A Beginner's Experience.

MR. EDITOR:—You request beekeepers to send you an account of their experience in keeping bees, so I thought I would send you mine. I commenced beekeeping in 1866, when I was fifteen years old, by buying an Italian queen of Mr. W. H. Furman, of Cedar Rapids, Iowa, whose advertisement I saw in an agricultural paper.

I put the queen and the few worker bees that came with her, into a large box hive, bought a pound of strained honey and fed them on a piece of tin, and waited with all the patience imaginable for them to go to work, thinking in my ignorance that they would build up a swarm. Well, they stayed there a week or two, built a small piece of comb, and then swarmed. Thinking the hive too large, I went to work and made a little one and put them in it. That was the last of them. At the time the queen was purchased, Mr. F. got me to subscribe for the Journal, and I soon saw what a donkey I had been making of myself. So I let the thing rest for a while until I could read and know a little about the business.

In March, 1870, I bought two swarms in old box hives, for twelve dollars (\$12.00), one of them one, and the other eight years old. I had heard a great deal said (and almost sung sometimes), about the (*Great*) American Bee-hive, so I bought the right (or wrong), and made me some of them, and now I would sell out my right pretty cheap. There, I have put in an advertisement Gallup fashion, and I expect somebody will give me fits for it. The season of 1870 was very dry in this part of the country, and but one

of my stocks gave me a new swarm, which left the hive just a month later, and tried to enter one of my neighbor's hives, and then there was war. I supposed they were all right, as they were going and coming very briskly, but on looking into the hive after they had left, I found it about half full of nice straight comb but not a drop of honey, and I came to the conclusion that they were starved out, and that I was ten dollars out of pocket. It looked very nice *on paper* to talk about going to a hive full of bees, and open and take out the frames, with all the little scamps coming at you, *sharp end first*. Result of the season, two stocks of bees in old box hives, some empty comb hives, and bee-keeper a little down in the mouth.

I didn't like the American hive, so I went to work as all new beginners are said to do, and got up a hive after my own fashion, which I *know* is better than the American. Last year I had better success, for both of my stocks sent off a large swarm each, that filled their hives and gave me several frames, and nearly two boxes full of honey. The swarms came off in the latter part of June, one of them twenty minutes of eight in the morning.

My frames hold twelve pounds each.

In July, with the help of my father and a neighbor, I managed to get the old stocks transferred into American hives. I say managed, for we had an awful time in getting the bees out, as they wouldn't drive for rapping on the hive, or for smoke, so we used brimstone until they were quiet; then went at the hives with chisel and hammer and got them transferred, what there was left of them, for I can assure you, Mr. Editor, that about half of them were quieted, so that they forgot to get up. By grand good luck we didn't happen to kill either of the queens. They gathered enough to winter on with a little feeding at the start. In the latter part of August we got seven swarms given to us, three of them late swarms, and the other four we got for taking the honey from the bees for the owner, who gave us the brood comb to transfer along with the bees. Two of them that were transferred on the 31st of August, filled their hives in fifteen days, about sixty pounds each. We did not use any brimstone on these, but put nets over our heads and gloves on our hands, and went for 'em. Mr. Editor, it would have made you laugh to have seen me *light out* for the corn field when my net got loose and the bees got under it. I have got over being afraid of the *sharp end* of a bee, but they will sting for all that, have done it (94) ninety-four times this season, and it *swells* too.

I have handled bees in almost every shape this last season, except introducing queens, and I am going to try that next season. I have made this letter longer than I meant to when I started, but I hope you will excuse me as I am a new beginner.

Brother Gallup, I am going to try some of your frames in my next hives.

Yours truly,

W. M. KELLOGG.

Onsida, Ill., Feb., 1872.

[For the American Bee Journal.]

Will "Novice" or B. Lunderer (blunderer?) state through the Journal how their cloth honey-boards work, as they both spoke favorably of it sometime since, and have now had time to test it thoroughly.

Our bees are in fine condition, having passed through the most severe winter in this section, since 1832. February 15th, we found plenty of eggs, brood in all stages, and young bees; they began about that time to carry in artificial pollen, which we fed them with avidity.

We are reminded by the activity of our pets, that the time is again drawing near to undergo the trial of importing queens, with its expense and usual suspense of waiting and watching to be rewarded by receiving about one-fifth of the number alive that you sent for, and they nearer dead than alive.

We saw Miss Morgan's statement in the Journal about sending for and receiving seven or eight (all she sent for), in good order, and think we can safely say, that it is without a parallel. Those foreigners must be a gallant set, and take extra pains in preparing queens for the fair sex.

But seriously, Mr. Editor, cannot there be some way devised that we can induce these foreign queen-raisers to take more pains in sending queens?

OWEN & LADD.

Brentwood, Tenn.

[For the American Bee Journal.]

Novice.

"Mr. Novice, those American Hives are a perfect nuisance! 'they ain't good for nothing.'"

TUT! TUT! strong assertious and bad grammar too. Rather say you think they are not good.

"Don't care, they deserve it all. I know they are not good. In your absence I have examined ever so many, and they have a miserably small amount of bees and brood compared with one Langstroth hive, and as they have equally good queens and plenty of honey, it must be owing to those miserable side opening hives. I declare, if I were the bees, I would swarm out of every one until you furnished better ones."

"But, what is the reason? are not tall hives better economy than low ones, and are not the flat, 'shallow things' always called bad for building up colonies in spring?"

We opened a bound volume of the American Bee Journal, page 69, vol. 3, where we in 1867, gave our reasons for preferring the American hive to the Langstroth.

"Well, what do you think of that?"

"Just this. I am very sorry to learn that you ever wrote any such foolish stuff. For the past three years the American hive has been far behind the Langstroth, more especially, and for reasons, we don't care for them. You men can spin long theories about rarified air rising and all that, but we women take facts as we find them."

"Please do come now, Mr. Novice, and look yourself over the thirty American hives and then see the Langstroth, and don't let us argue any more when we can use our eyes so easily."

Well, Mr. Editor, we did examine carefully the thirty tall hives, and then an equal number of the flat ones, and the result was only *much more marked* than we had supposed from observations for the past three or four years.

In the American hive there seems to be a dislike to enlarging the brood circle *downward*, which they must do, as the brood is invariably in spring near the top bars. In the Langstroth hive the brood circle enlarges horizontally and the result decided was to instantly transfer all comb to the Standard Langstroth frames, not only from the American hive, but sundry other patent hives that we have been induced to give a trial; and, Mr. Editor, we have now got it all done neatly, and draw a long breath of relief when we realize that now we shall no more be bothered with close fitting tops and side openers.

We are using one of the Gallup hives, but even at the risk of being called an "old woman," again we must say that we cannot make the queen work down to the bottom of the comb in order to enlarge her circle of brood as readily as we do with the Langstroth hive; yet we selected for the experiment, one of our best queens.

Just imagine an apiary of such system that any frame will go *just right* in any hive with the accuracy almost of American watch work, and you can see what we have been working at for the past few days, and if we don't have something of that kind nearer perfect than we have ever seen, (although many claim it), we shall be much mistaken.

We have several questions in regard to that bee disease.

Mrs. A. D. Morgan, of Pella, Iowa, asks if we consider the honey, taken from stocks that have perished, safe to feed others.

After the bees are out and flying in the spring, we always feed anything they will eat, and have never had any bad results; in fact have never seen any trace of the bee-disease or dysentery, when the weather was such that they could fly.

Will our Western friends who have lost so heavily, please tell us if they are ever troubled *after* the bees are flying in the spring.

In regard to spotting the snow in spring, it pains us to see friend Gallup speak so harshly about his statements not being believed. We may have mentioned in the Journal that we thought some statements were a mistake, but certainly never meant to intimate that any one of our "large family" told a wilful falsehood.

It was not Mr. Gallup's statement that we referred to, but another one, which we have since found, and we only thought that if the writer had looked very carefully he would have found some spots.

Others besides Mr. Gallup have given the theory that when young bees were raised largely in the fall there would be no dysentery, but alas, for theories! the particular stock we wrote about had a drone laying queen and not a bee was hatched after the first of September. We wrote Mr. Langstroth for a queen, which he was not

able to furnish us in the fall, and so the drone layer was kept until the latter part of March, when some brood had to be given them to keep them from failing, so that we had all *old bees* and but few in number, yet in flying freely in February no spot was left on the snow *at all*.

Another asks if they all had pollen; to which we reply that we have not been able to find a colony destitute of pollen, even in winter.

In fact, out of the sixty-three stocks we found ample material for studying the subject most thoroughly, which we were compelled to do on account of sharper criticisms than Gallup's, that came from an individual much nearer us.

If anything else besides a pure winter diet of coffee sugar is needed, we shall have abundant opportunity to test it next winter, and will do it. We shall discard every particle of natural honey for winter use; and then if the snow is not discolored and *all* colonies healthy, which we have never had yet, we shall sail all the hats we got, old and new, "better half's," children's and all (just their hats).

Mr. Gallup's article on nuclei's hives, p. 242, we most earnestly commend. If any one thinks his plan too much trouble, we should tell them that we really doubt whether a beekeeper can use his time to any better advantage. The same directions will apply to the ordinary Langstroth hive, with such modifications as any one will readily perceive.

We might here mention that as an experiment, we killed the drone laying queen before alluded to, and allowed the old bees, assisted by a few young ones—less than a teacupful in all—to rear queens. For some time no cells were started, but at length, only two, and then they were quickly capped, as the larvæ was nearly ready to seal over.

One hatched in a very short time after sealing, and our assistants could find no queen, although the cell was opened properly, but we saw her at once, as we knew by previous experience what to look for, viz.: a three banded worker with rather tapering body, shaped like a queen between the shoulders, and of quick, restless movement, unlike a newly hatched worker bee. We killed her and let the other cell hatch. She was much the same, only perhaps a little more queen-like, and we will report if she lays, and how much.

We have had queens when first hatched almost as unprepossessing, that afterward became the mothers of some of our finest colonies, but not usually. Some have laid only a few hundred eggs or so, and then stopped or become drone layers.

"There, Mr. Novice, is a proof that full colonies are best for raising queens, right before my eyes."

Oh, no! not so strong as that, but so far a proof, that a teacupful of bees, all either *very old* or too young to *fly in cool weather* cannot raise a good queen, judging from many careful experiments, we think that one pint of bees of proper age, in warm weather, during a *yield of honey*, will raise as good queens as a two-story hive full of bees."

"But I should prefer being on the safe side."

Before answering this we tried to speak mildly, for we always try to speak mildly when an argument comes up; that is, if we don't get too much interested.

"Even to devoting every one of our sixty colonies to queen raising just now, if it was necessary to have sixty queens within a month."

We fear queens would be more than five dollars each at that rate, and we should be very anxious to know whether such a proceeding would really be any safer or produce any better queens.

Our basswood orchard is at this date, May 11th, in our opinion, glorious. Almost every tree has started, and some of them have put out shoots three inches in length.

The chestnuts are also doing their best, and altogether the effect of the thousands with their delicate green round leaves just touched by the rising sun, dew drops and all, is just what we said—"glorious."

That all our bee-keeping friends might stand with us and feel the thrill of pleasure in contemplating the willingness with which old "dame nature" lends her wondrous powers to our guidance, is the wish of your old friend,

NOVICE.

[For the American Bee Journal.]

Transferring Bees.

As quite a number have given their method of transferring bees, and as ours is somewhat different we send it. Our plan is as follows: 1st. We prepare the frames by nailing two strips of wood on each side with one-half inch cleft nails. We then pry the strips loose at one end, on one side of the frame (the strips should run lengthwise on the frame), and turn one strip up and the other down, each a quarter of a circle. We then place the frame bottom side up on a support prepared for the purpose. The frame should be slightly inclined from us.

2d. We prepare the hive by inverting it. Take off one side of the hive that will leave the broad side of the comb towards us. We then place a box over the hive for the bees to go up into.

3d. Transferring. We cut the comb to a measure to fit the frame, and place it in the frame. We then turn the strips to their place and press the nails into place with our thumb; we then place the frame into the hive, and it is done, so far. We have transferred bees from the woods without trouble. Ten or fifteen minutes is long enough to transfer a colony. In transporting a colony we fasten two or more frames together at the end that just fit into the hive; these strips are nailed to the frames.

Will some of the readers of the Journal tell us if it makes any difference if the comb is placed in the frame bottom side up. Some think it does not; we think it does.

SESSAYE.

Rice Co., Minn.

In a word, thou must be chaste, cleanly, sweet, sober, quiet, and familiar; so that they love thee and know thee from all others.

BUTLER.

[From the Ohio Farmer.]

The Home of the Honey Bee.

It is said that our honey bee, the *apis mellifica*, originally came from Asia, and that from there it was imported into Europe, and afterward to our country, where it has had so welcome a home and entered so largely into our resources for comfort and revenue.

Though this busy and profitable servant has received many a fatal smoking and robbing as a reward for its labors, yet it has the freedom of our wide domain, and in the deep wilderness, multitudes of swarms live in security, as possessors of all their store.

In this country the bee is considered an amiable insect by its friends, seldom using its sting, except when on the defensive. I have never noticed this amiability, for several times when a boy I received a thrust that seemed to have been given with "malice prepense." Severe as the sting is here (especially when about the eye or lips), I am satisfied that it is much more so in the East. I never was stung while in that country by one, but from the accounts given by the natives, and by foreigners who have suffered from them, I am sure it must be so. I believe that in this country some persons can handle bees with far less danger than others; not because they are more kind and careful, but because they have a natural adaptation to the work; such as Rarey, Magner and Dudley have had to the training of horses.

The Siamese have their beehunters, and they say that "only here and there one can follow the business, because the bees so bite. The bee men, they don't like the smell of, and they bite them but little. They bite very hard and always when they get squeezed."

They never domesticate them in Siam, but hunt for them in the jungle, and when found, always rob them clean. This must provoke the bees, but is not fatal to them, for they live in a country where they have to lay nothing up for winter, and when robbed of what they have on hand, have (*a la* Chicago) only to begin anew.

In this country the wild bees usually seek some crevice or hollow tree in which to spread their wax and deposit their stores. But there I was told they build their combs in the open air, usually selecting as high a point as possible in the tops of some of the lofty trees. The point usually chosen is on the under side of some limb just when it leaves the body of the tree. This is often found fifty or even seventy feet from the ground.

The beehunters have ways of tracing bees similar to those practiced in our country. At a certain point they expose some sweet scented dish, and then trap the bees that gather there, and after a time let one escape. Glad to be liberated, it will rise in the air, and then make a bee line for home. They watch the direction and then follow on. When they need further direction another is let out, and on they go under its lead, and then another, until they find the prize.

But yet they have not the honey in hand. It

is full fifty feet above their heads on the lowest limb of some stately tree.

The beeman prepares to ascend. He takes his cord and basket, his knife and resinous torch, covers his body as well as he can with spare clothes of his companions and commences the ascent. When within a few feet of the comb, he lights his torch which he lets drop just below him. This fumigates his person and also puts all the bees on the wing, and they fly around in the greatest excitement and rage. He pays no attention to them, but deliberately throws his basket over the limb, and with his knife cuts off the comb, and by a cord lets it down to his partners below. He then descends and has but few stings to repent.

The quantity usually gathered from any one swarm is not large, for the bee is disposed, with all the rest of the animal creation, to take life easy, in that country, where no winter store has to be laid by, and

"where everlasting spring abides
And never withering flowers."

It is said that "every man is as lazy as he can be," and probably the same is true of the "little busy bee," that during one short summer works so faithfully and improves each "shining hour,"

"And gathers honey all the day,
From every opening flower."

The honey is never brought to market there in comb, but is always strained. It is not considered much of a luxury, nor very salable as an article of food. It is always very thin and looks more like weak maple syrup than honey. But it has a soft pleasant taste, and if we only could have had some good bread and butter to have eaten with it, no doubt it would have been in greater demand.

From the amount of beeswax that is in market in Bangkok, it must be true that a great quantity of honey is gathered every year from the jungles round about.

[For the American Bee Journal.]

The Extractor.

MR. EDITOR:—We now intend attempting to answer quite a prominent question with correspondents about how to manage with the extractor, extracted honey.

In our large yield, we can work the extractor by the side of the hive that we are operating on unmolested by robbers. But at other times we use a tight box, and as fast as we take out a comb and get off the bees, we place it in the box, shutting down the cover so that no bees can get at it, and continue thus until we have taken out all we wish from that hive. Then close the hive and carry the box containing the honey into a close room, there to extract the honey. We like to keep one set of empty combs on hand to fill the hive at the time. This saves opening again to return the combs. We cut the caps off the cells into a vessel that has a strainer in the bottom, which permits all the honey to drip out.

After draining, these caps are removed to a tight vessel and put to soak with a little water. After soaking the water is drained off and put into the vinegar barrel, and makes excellent vinegar. The comb is then ready to make into wax. Our extracted honey we do not bung up if put in casks, under twenty-four hours. If put in glass jars, we prefer to put it into an open barrel or vessel and let it stand over night, as it goes through a process of working and there is quite a scum raises to the top. This scum goes into the vinegar barrel also. In our first season's operations we put it warm, right from the machine into the jars and closed them up, and we found on selling them this scum did not look well on the top, and on opening them and exposing the honey to the air, it acquired such a disagreeable flavor that it could scarcely be used. It was terribly annoying to us to have our customers come to us with such complaints. By running it into an open vessel or barrel, and allowing it to go through the working process over night, then scumming and canning, it is all right. It is also better to allow it to stand awhile before putting it in a barrel. By so doing, if the honey is thinner in some hives than others, mixing brings all right. We put up our honey, the past season in new oak butter casks (heads in both ends), containing almost 150 pounds each, and we have kept them in the cellar. When wanted for use we loosen the top hoops, take out the head and melt it over the fire, as it soon candies or grains solid in the casks. Melting or scalding improves the flavor of late fall honey amazingly. In melting we do not put any water with it. We prefer our honey and water separate.

Here is another question. *How long will extracted honey keep?* It will keep a great deal longer in some families than others. Extracted honey is comparatively a new thing under the sun, and many accuse us and others of making honey out of sugar, &c. We opened one cask of our honey (and we don't know but we sold some of the same sort without opening), that looked very much like sugar. It was coarse grained and the grain looks like the grain of coarse sugar to the naked eye, and if we had not put it up ourself we certainly should have thought it moist sugar. Yet, it was honey for all that, and when melted, of a peculiar rich flavor and of a rich golden color. It was gathered from corn blossoms. We plant a few acres of the white flint or Dutton corn on purpose for our bees. It produces abundance of honey and pollen. Dent, or western corn, produces almost nothing for bees.

ELISHA GALLUP.

Orchard, Iowa, April 18, 1872.

In March, when the bees fly, set out rye meal, and see if every colony brings in some. Examine those that do not. Bees with a fertile worker bring in pollen also. Do not take the meal away as soon as pollen is brought in, for weak colonies do not fly far, and often pollen fails again; my bees worked two to three weeks on the meal after the pollen had come in.

HULLMAN.

[For Wagner's American Bee Journal.]

The Bee Hive Controversy.

We reprint Mr. King's reply to our criticisms on the Williams article, and to our vindication of Mr. Wagner. The readers of the Journal will know how to put a proper estimate upon it without a single word of comment from us. We shall republish in a separate pamphlet, as a supplement to the American Bee Journal, the whole of this controversy (*both sides*) as it has appeared in the pages of this Journal.

"Mr. Langstroth's Last Words."

We have too much matter of interest to beekeepers, to devote much space to personal affairs merely, hence we shall only glance at the voluminous valedictory of Mr. L.

The terrible "charges," the awful "treachery," the "damaging facts," have now been used as "legitimate weapons of an honorable warfare;" the pent-up, concentrated hate of years has been poured forth, and, contrary to Mr. L.'s expectations, we are not dead yet. It was too bad to keep us in "quivering suspense" for a whole month, before we could know our doom. The broadside has come, and after the smoke cleared up, we not only find ourselves alive, but positively *uninjured*. Should we not be thankful?

From an analysis of Mr. L.'s last two articles, it is evident that he considered *any* weapons he could employ against us as "legitimate" and "honorable," and if he could not kill us with one, he would with another. The awful "treachery" turns out to be only his view of what he supposes to have been our representations, in making a bargain several years since with his son, now deceased. The "garbling for a base purpose" has dwindled down to a mere difference of opinion as to whether the quotation with the omission of a clause which we indicated by asterisks, was garbling or not. He sustains his opinion by repeating the accusation, while we say the omission was made to avoid occupying space in the discussion of another subject which would have been introduced.

The attempt to create a prejudice against us by almost, if not actually asserting that we had asked him to prosecute other hive dealers, is a shrewd one, but in the end, Mr. L. will find that "Honesty" would have been "the better policy." He *knows* that he cannot produce one particle of evidence to prove this inferred charge. That was his son's proposition, made probably to secure as few unfavorable exceptions as possible, and in closing the arrangement we merely reminded them of the fact. We have done more for beekeepers in this particular than all others combined. "Actions speak louder than words," hence we do not fear that Mr. L. will establish much prejudice against us.

As an indication of how thinking men regard Mr. L.'s articles, we present the following extract (not garbled), from a letter we have just received.

"What is the matter with Mr. L.? He goes at you with hammer and tongs in column after column of trash without a single show of anything damaging. According to his own testimony you have done nothing which is not in strict accordance with business principles, and ordinary transactions. I was astonished to find such trivial matters magnified into mountains of sinfulness by one I have for years delighted to hold in grateful respect."

[For the American Bee Journal.]

Natural Prolific and Hardy Queens.

Answer to Mr. Dadant's last blow.

On pages 206 and 207, March No. of the American Bee Journal, Mr. Dadant asks me to answer his article—which should be headed “A Chapter of voluntary mistakes,” by Charles Dadant.

For I find it composed entirely of such, and I propose to prove them such.

Voluntary mistake No. 1. On page 206, he says, “yet nowhere did Novice say that his queens were too *old*, but that he replaced hybrid queens.”

Voluntary mistake No. 2. On page 206, he says, “so little did I promise to replace her, and so little did Mr. Price believe that I made such promise,” &c.

Voluntary mistake No. 3. On page 207, he says, “I never refused to replace her.”

Voluntary mistake No. 4. On page 207, he says, “but I did refuse to sell a second queen to Mr. Price.”

Answer to mistake No. 1. On page 224, vol. VI, American Bee Journal, April No. 1871, Novice gives his reasons for his purchasing twenty-five queens from Mr. Grimm in these words: “and last fall *so many* of our *old* queens failed, that we purchased twenty-five queens from Mr. Grimm to replace them.”

Answer to mistake No. 2: (Extract of letter.)

HAMILTON, ILL., June 7, 1870.

MR. J. M. PRICE,

DEAR SIR:—The queen I sent to you is raised from imported stock and is very prolific. *I guarantee her all right.*

In my letter ordering, I not only asked him to guarantee her safe arrival, but that he guarantee her pure—purely mated and prolific, and referred him to my article “All Abroad,” and told him that if he thought he had a queen that would be satisfactory, after he had read that article, to send her to me C. O. D.

That I did expect him to replace her is proved by my writing to him, informing him of her unprolificness.

He answered me as follows:

HAMILTON, ILL., Aug. 4, 1870.

MR. J. M. PRICE,

DEAR SIR:—Do not give her up before another season's trial.

Yours respectfully,

CHAS. DADANT.

As this was not replacing her, I wrote again. He answered as follows: (Extract.)

HAMILTON, ILL.

MR. JNO. M. PRICE,

DEAR SIR:—As soon as the bees can raise queens I will send one to you next spring.

Yours respectfully,

CHAS. DADANT.

Beekeepers, have I not proved that he did expect to replace her, and did know that he had promised to do so?

I will give you an extract of his advertisement in the Journal at the time he sent her to me.

Advertisement from April to September, 1870: (Extract.)

“The queens will be sent from here safe arrival guaranteed.”

April, 1870, 6 mos.

CHAS. DADANT,

Hamilton, Ill.”

In the spring I wrote him of her condition and received not the queens, as promised, but the following letter:

HAMILTON, ILL., April 21, 1871.

MR. JNO. M. PRICE,

DEAR SIR:—You did so much fuss about the queen I sent you last spring, that I am very little disposed to let you (*have*) any more queens.

Yours very respectfully,

CHAS. DADANT.

Answer to mistake No. 4. His last letter to me before his refusal: (Extract.)

HAMILTON, ILL.

“But I think your best way be to get one or two imported queens.”

CHAS. DADANT.”

Friend Beekeepers:—After reading the above correspondence, and his advertisement, what shall we call his Wilful Voluntary Mistakes? Also under what head shall I class his mode of getting money? But after wronging me out of my money (which is a very small part of the damage that the sending of that worthless queen was to me), is it a sign of an honest dealer to go back of his guarantee on an order, and keep the money that he came into possession of by that guarantee, and after beating me out of my money in that manner? Is it a sign of a gentleman to try and add insult to injury and wrong by his false “Wilful Voluntary Mistakes?”

JOHN M. PRICE.

Buffalo Grove, Iowa, March 10, 1872.

[From Shuckards' “BRITISH BEES.”]

Bees.

It is very natural that the bees should interest the majority of us, so many agreeable and attractive associations being connected with the name. It is immediately suggestive of spring, sunshine, and flowers,—meadows gaily enamelled, green lanes, thymy downs, and fragrant heaths. It speaks of industry, forethought, and competence,—of well ordered government, and of due but not degrading subordination. The economy of the hive has been compared by our great poet to the polity of a populous kingdom under monarchical government. He says:—

“Therefore doth Heaven divide

The state of man in divers functions,

Setting endeavor in continual motion;

To which is fixed, as an aim or butt,

Obedience: for so work the honey bees;

Creatures, that, by a rule in nature, teach

The act of order to a peopled kingdom.

They have a king, and officers of sorts:

Where some, like magistrates, correct at home;

Others, like merchants, venture trade abroad;

Others like soldiers, armed in their stings,
 Make boot upon the summer's velvet buds;
 Which pillage they, with merry march, bring home
 To the tent-royal of their emperor:
 Who, envied in his majesty, surveys
 The singing masons building roofs of gold;
 The civil citizens kneading up the honey;
 The poor mechanic porters crowding in
 Their heavy burdens at his narrow gate;
 The sad-eyed justice, with his surly hum,
 Delivering o'er to executors pale
 The lazy yawning drone."—HENRY V, 1, 2.

Nothing escaped the wonderful vision of this "myriad minded" man, and its pertinent application. This description, although certainly not technically accurate, is a superb broad sketch, and shows how well he was acquainted with the natural history and habits of the domestic bee.

The curiosity bees have attracted from time immemorial, and the wonders of their economy elicited by the observation and study of modern investigators, is but a grateful return for the benefits derived to man from their persevering assiduity and skill. It is the just homage of reason to perfect instinct running closely parallel to its own wonderful attributes. Indeed, so complex are many of the operations of this instinct, as to have induced the surmise of a positive affinity to reason, instead of its being a mere analogy, working blindly and without reflection. The felicity of the adaptation of the hexagonal waxen cells, and the skill of the construction of the comb to their purposes, has occupied the obtruse calculations of profound mathematicians; and since human ingenuity has devised modes of investigating, unobserved, the various proceedings of the interior of the hive, wonder has grown still greater, and admiration has reached its climax.

The intimate connection of "bees" with nature's elegancies, the flowers, is an association which links them agreeably to our regard, for each suggests the other; their vivacity and music giving animation and variety to what might otherwise pall by beautiful but inanimate attractions. When we combine with this the services which bees perform in their eager pursuits, our admiration extends beyond them to their great originator, who, by such apparently small means, accomplishes so simply yet completely, a most important object of creation.

That bees were cultivated by man in the earliest conditions of his existence, possibly whilst his yet limited family was still occupying the primitive cradle of the race at Hindoo Koosh, or on the fertile slopes of the Himalayas, or upon the more distant table land or plateau of Thibet, or in the delicious vales of Cashmere, or wherever it might have been, somewhere widely away to the east of the Caspian Sea,—is a very probable supposition. Accident furthered by curiosity, would have early led to the discovery of stores of honey which the assiduity of the bees had hoarded; its agreeable odor would have induced further search, which would have strengthened the possession by keener observation, and have led in due course to the fixing of them in his immediate vicinity.

To this remote period, possibly not so early as

the discovery of the treasures of the bee, may be assigned also the first domestication of the animals useful to man, many of which are still found in those districts in all their primitive wildness. The discovery and cultivation of the cereal plants will also date from this early age. The domestication of animals has never been satisfactorily explained, but all inquiry seems to point to those regions as the native land, both of them, and of the *graminae* which produce our grain; for Heinzeleman, Linnæus' enthusiastic disciple, found there those grasses still growing wild, which have not been found elsewhere in a natural state.

Thus, long before the three great branches of the human race, the Aryan, Shemetic, and Turanian, took their divergent courses from the pre-creative nest which was to populate the earth, they were already endowed from their patrimony with the best gifts nature could present to them; and they were thus fitted, in their estrangement from their home, with the requirements, which the vicissitudes they might have to contend with in their migrations, most needed. They would eventually have settled into varying conditions, differently modified by time acting conjunctively with climate and position, until in the lapse of years, and the changes the earth has since undergone, the stamp impressed by these causes, which would have been originally evanescent, became indelible. That but one language was originally theirs, the researches of philology distinctly prove, by finding a language still more ancient than its Aryan, Shemetic, and Turanian derivatives. From this elder language these all spring, their common origin being deduced from the analogies extant in each. These investigations are confirmed by the Scriptural account "That the whole earth was of one language and of one speech," previous to the Flood, and it describes the first migration as coincident with the subsidence of the waters.

That animals have been domesticated in a very early stage of man's existence, we have distinct proof in many recent geological discoveries, and all these discoveries show the same animals to have been in every instance subjugated; thus pointing to a primitive and earlier domestication in the region where both were originally produced. That pasture land was provided for the sustenance of those animals, they being chiefly herbivorous, is a necessary conclusion. Thence ensues the fair deduction that *phanerogamous* or flower-bearing plants coexisted, and bees, consequently, and necessarily too—thus participating reciprocal advantages, they receiving from those plants sustenance, and giving them fertility.

Claiming thus this very high antiquity for man's nutritive "bee," which was of far earlier utility to him than the silk worm, whose labor demanded a very advanced condition of skill and civilization, to be made available; it is perfectly consistent, and indeed needful, to claim the simultaneous existence of all the bees' allies. The earliest Shemetic and Aryan records, the Book of Job, the Vedas, the Egyptian sculptures and papyri, as well as the poems of Homer, confirm the early cultivation of bees by man for domestic uses; and their frequent representa-

tion in the Egyptian hieroglyphics, wherein the bee occurs as the symbol of royalty, clearly shows that their economy, with a monarch at its head, was known; a hive, too, being figured, as Sir Gardner Wilkinson tells us, upon a very ancient tomb at Thebis, is early evidence of its domestication there, and how early even historically, it was brought under the special dominion of mankind. I adduce these particulars, merely to intimate how very early, even in the present condition of the earth, bees were beneficial to mankind, and that, therefore, the connection may have subsisted, as I have previously urged, on the remotest and very primitive ages of the existence of man; and that imperatively with them, the entire family of man, of which they form a unit only, was also created.

In America, where *apis mellifica* is of European introduction, swarms of these bees, escaping domestication, resume their natural condition, and have pressed forward far into the uncleared wild; and widely in advance of the conquering colonist, they have taken their abode in the primitive unreclaimed forest. Nor do they remain stationary, but on, still on, with every successive year, spreading in every direction; and thus surely indicating to the aboriginal red man, the certain, if even slow, approach of civilization, and the consequent necessity of his own protective retreat—a strong instance of the distributive processes of nature. It clearly shows how the wild bees may have similarly migrated in all directions from the centre of their origin. That they are now found at the very *ultima Thula*, so far away from their assumed incunabula, and with such apparent existing obstructions to their distributive process, is a proof, had we no other, that the condition of the earth must have been geographically very different at the period of their beginning, and that vast geological changes have, since then, altered its physical features. Where islands now exist, these must then have formed portions of widely sweeping continents, and seas have been dry land, which have since swept over the same area, insulating irregular portions by the submergence of irregular intervals, and thus have left them in their present condition, with their then existing inhabitants restricted to the circuit they now occupy. That long periods of time must necessarily have elapsed to have effected this by the methods we still see in operation, is no proof that it has not been. Nature, in her large operations, has no regard for the duration of time. Her courses are so sure that they are ever eventually successful; for as to her, whose permanency is not computable, it matters not what period the process takes; and she is as indifferent to the seconds of time, whereby man's brevity is spanned, as she is to the wastefulness of her own exuberant resources, knowing that neither is lost in the result at which she reaches; consuming the one, and scattering broadcast the other, but in unnoticeable infinitesimals, she does it irrespective of the origin, the needs, or the duration of man, who can only watch her irrepressible advances by transmitting from generation to generation the records of his observation; marking thus by imaginary stations the course of the

incessant stream which carries him upon its surface.

That other bees are found besides social bees, may be new to some of my readers, who will perhaps learn now, for the first time, that collective similarities of organization and habits associate other insects with "the bee," as bees. Although the names of "domestic bee," "honey bee," or "social bee," imply a contradistinction to some other "bee," yet it must have been very long before even the most acute observer could have noticed the peculiarities of structure which constitute other insects "bees," and ally the "wild bees" to the "domestic bee," from the deficiency of artificial means to examine minutely the organization whereby the affinity is clearly proved. This is also further shown in the poverty of our language in vernacular terms to express them distinctively; for even the name of "wild bees," in as far as it has been applied to any except the "honey bee" in a wildened state, is a usage of modern introduction, and of date subsequent to their examination and appreciation. Our native tongue, in the words "bee," "wasp," "fly," and "ant," compasses all those thousands of different winged and unwinged insects which modern science comprises in two very extensive orders in entomology of the *Hymenoptera* and the *Diptera*,—thus exhibiting how very poor common language is in words to denote distinctive differences in creatures even when the differences are so marked, and the habits so dissimilar, as in the several groups constituting these orders. But progressively extending knowledge, and a more familiar intimacy with insects and their habits, will doubtless, in the course of time, supervene, as old aversions, prejudices, and superstitions wear out, when by the light of instruction we shall gradually arouse to perceive that "His breath has passed that way too;" and that, therefore, they all put forth strong claims to the notice and admiration of man.

It is highly improbable that ordinary language will ever find distinctive names to indicate *genera*, and far less *species*; and although we have some few words which combine large groups, such as "gnats," "flesh flies," "gad flies," "gall flies," "dragon flies," "sand wasps," "bumble bees," &c., &c.; and, although the small group, which it is my purpose to describe hereafter in all their attractive peculiarities, has had several vernacular denominations applied to them to indicate their most distinctive characteristics, such as "cuckoo bees," "carpenter bees," "mason bees," "carding bees," &c., yet many which are not thus to be distinguished will have to wait long for their special appellation.

The first breathings of spring bring forth the bees. Before the hedgerows and the trees have burst their buds, and expanded their yet delicate green leaves to the strengthening influence of the air, and whilst only here and there the whole blossoms of the black thorn sparkle around, and patches of chickweed spread their bloom in attractive humility on waste bits of ground in corners of fields, they are abroad. Their hum will be heard in some very favorite sunny nook, where the precious primrose spreads forth its delicate pale blossoms, in the modest confidence

of conscious beauty, to catch the eye of the sun, as well as

"Daffodils, that come before the swallow dares,
And take the winds of March with beauty."

The yellow catkins of the willow, too, are already swarmed around by bees, the latter being our Northern representative of the palm, which heralded "peace to earth and good will to man." The bees thus announce that the business of the year has begun, and that the lethargy of winter is superseded by energetic activity.

The instinctive impulse of the cares of maternity prompt the wild bees to their early assiduity, urging them to their eager quest of these foremost indications of the renewed year. The firstling bees are forthwith at their earnest work of collecting honey and pollen, which, kneaded into paste, are to become both the cradle and the sustenance of their future progeny.

Wherever we investigate wonderful Nature, we observe the most beautiful adaptation and arrangement; everywhere the correlations of structure with function. In confirmation of which I may here briefly notice in anticipation, that the bees are divided into two large groups—the short-tongued and the long-tongued—and it is the short-tongued which are first abroad, the corolla of the first flowers being shallow, and the nectar depositories obvious, an arrangement which facilitates their obtaining the honey already at hand. These bees are also amply furnished, in the clothing of their posterior legs, or otherwise, with the means to convey home the pollen which they vigorously collect, finding it already in superfluous abundance, and which, being borne from flower to flower, impregnates and makes fruitful those plants which require external agents to accomplish their fertility. Thus nature duly provides, by an interchange of offices, for the general good, and by simple, although sometimes obscure means, gives motion and persistency to the wheel within wheel which so exquisitely fulfil her designs, and roll forward, unremittingly, her stupendous fabric.

The way in which bees execute this object and design of nature, and to which they, more evidently than any other insects, are called to the performance, is shown in the implanted instinct which prompts them to seek flowers, knowing, by means of that instinct, that flowers will furnish them with what is needful both for their own sustenance and for that of their descendants. Flowers, to this end, are furnished with the requisite attractive qualifications to allure the bees. Whether their odor or their color be the tempting vehicle, or both conjunctively, it is scarcely possible to say, but that they should hold out special invitation is requisite to the maintenance of their own perpetuity. This, it is supposed, the color of flowers chiefly effects by being visible from a distance. Flowers, within themselves, indicate to the bees visiting them, the presence of nectaria by spots colored differently from their petals. This nectar, gathered by the bees as honey, is secreted by glands or glandulous surfaces, seated upon the organs of fructification; and Nature has also furnished means to protect these depositories of honey for

the bees from the intrusive action of the rain, which might wash the secretion away. To this end it has clothed the corolla with a surface of minute hairs, which effectually secures them from its obtrusive action, and thus displays the importance it attaches to the co-operation of the bees. That bees should vary considerably in size is a further accommodation of Nature to promote the fertilization of flowers, which, in some cases, none but small insects could accomplish. Many plants could not be perpetuated but for the agency of insects, and especially of bees; and it is remarkable that it is chiefly those which require this intervention that have a nectarium and secrete honey. By thus seeking the honey, and obtaining it in a variety of ways, bees accomplish this great object of Nature. It often, also, happens that flowers which even contain within themselves the means of ready fructification, cannot derive it from the pollen of their own anthers, but require that the pollen should be conveyed from the anthers of younger flowers. In some cases the reverse takes place, as, for instance, in the *Euphorbia Cyparissias*, wherein it is the pollen of the older flower which, through the same agency, fertilizes the younger. In those occasional cases where the nectarium of the flower is not perceptible, if the spur of such a flower which usually becomes the depository of the nectar, that has oozed from the capsules secreting it, be too narrow for the entrance of the bee, and even beyond the reach of its long tongue, it contrives to attain its object by biting a hole on the outside, through which it taps the store. The skill of bees in finding the honey, even when it is much withdrawn from notice, is a manifest indication of the prompting instinct which tells them where to seek it, and is a matter of extreme interest to the observer, for the honey marks surely guide them; and where these, as in some flowers, are placed in a circle upon its bosom, they work their way around, lapping the nectar as they go. To facilitate this fecundation of plants, which is Nature's prime object, bees are usually more or less hairy; so that if even they limit themselves to imbibing nectar, they involuntarily fulfil the greater design by conveying the pollen from flower to flower. To many insects, especially flies, some flowers are a fatal attraction, for their viscous secretions often make these insects prisoners, and thus destroy them. To the bees this rarely or never happens, either by reason of their superior strength, or possibly from the instinct which repels them from visiting flowers which exude so clammy a substance. It is probably only to the end of promoting fertilization by the attraction of insects that the structure of those flowers which secrete nectar is exclusively conducive, and which fully and satisfactorily explains the final cause of this organization.

To detect these things it is requisite to observe Nature out of doors—an occupation which has its own rich reward in the health and cheerfulness it promotes—and there to watch patiently and attentively. It is only by unremitting perseverance, diligence and assiduity, that we can hope to explore the interesting habits and pecu

liar industries of these, although small, yet very attractive insects.

Amongst the early blossoming flowers most in request with the bees, and which therefore seem to be great favorites, we find the chickweed (*Alsiue media*), the primrose, and the catkins of the willow; and these in succession are followed by all the flowers of the spring, summer and autumn. Their greatest favorites would appear to be the *Amentaceae*, or catkin-bearing shrubs and trees; the willow, hazel, osier, &c., from the male flowers of which they obtain the pollen, and from the female the honey; all the *Rosaceae*, especially the dog-rose, and the *Primulaceae*, the *Orchideae*, *Caryophyllaceae*, *Polygonaceae*, and the balsamic lilies. Clover is very attractive to them, as are also tares; and the spots on those leaves of the bean which appear before the flower, and exude a sweet secretion; the flowers of all the cabbage tribe. Beneath the shade of the Linden, when in flower, may be heard above one intense hum of thrifty industry. The blossoms of all the fruit trees and shrubs, standard or wall, and all aromatic plants, are highly agreeable to them, such as lavender, lemon-thyme, mignonette, indeed all the *resedas*; also sage, borage, &c.; but to mention separately all the flowers they frequent would be to compile almost a complete flora.

Bees are also endowed with an instinct that teaches them to avoid certain plants that might be dangerous to them. Thus they neither frequent the oleander nor the crown imperial, and they also avoid the *Ranunculaceae*, on account of some poisonous property; and although the *Melanthus major* drops with honey, it is not sought.

Bees may be further consorted with flowers by the analogy and parallelism of their stages of existence. Thus the egg is equivalent to the seed; the *larva* to the germination and growth; the *pupa* to the bud, and the *imago* to the flower. The flower dies as soon as the seed is fully formed, which is then disseminated by many wonderful contrivances to a propitious soil; and the wild bees die as soon as the store of eggs is wonderfully deposited, according to their several instincts, in fitting receptacles, and provision furnished to sustain the development of the progeny. Thus each secures perpetuity to its species, but individually ceases.

[For the American Bee Journal.]

Gallup hits Somebody.

MR. EDITOR:—We have the April No. *all right*. The first on the docket that claims our attention, is Dr. Bohrer. He infers that we disagree with Mr. Langstroth, and condemn the two-story Langstroth hive, because we said there was any quantity of worthless hives at Cleveland. The reader will readily see that we did not say that there was no good hive there. *By no means*. Now, Doctor, never again use such a shallow excuse to get in your F. R. Allen hive. Old birds are not often caught with chaff. The next is T. F. Bingham. He is afraid he will have to hear for the next five years about Gal-

lup's hive. Now the reader knows that Mr. B. has a patent hive, and it galls some of those patent hive fellows *terribly* to think that after all the boasting, THE OLD LANGSTROTH PRINCIPLE IS STILL AHEAD.

Some of them would give considerable, if Gallup and the AMERICAN BEE JOURNAL were dead and buried, but it is our sincere desire that the influence of the American Bee Journal may never be less. Now will the reader please take notice that in giving a description of the hive we use, we have no other motive than to illustrate a principle in beekeeping.

We have already forwarded an article illustrating how to use the Langstroth hive on the same principle. We certainly believe we could have obtained the same results from a regular Langstroth spread out horizontally in such a season as the past. I have already cautioned others not to go into the large Gallup hive extensively, but make one or two for trial. We always prefer a good season for getting a large yield of honey.

This buying up extracted honey and feeding to one or two stocks, so as to be able to report an extra large yield per hive, and thus create a demand for a particular hive, is not what Gallup believes in. *We have no hives for sale, and consequently no axe to grind.*

The next is Novice, and oh how we are going to hit him! He says he really likes the Quinby frame or a large one. Now, Novice, warrant us just such seasons as the past two and we are with you; but how is it in a cool wet season, when our stocks are only medium sized. All of the honey gathered is thin and watery and needs a great deal of evaporation, and we have no extractors, but are compelled to use a hive in which we can condense the bees into a small compass or compact mass; or our honey is sealed up before it is half evaporated, and the consequence is, our bees all die over winter from dysentery. We have paid dearly for our knowledge on this subject. We have seen a number of such seasons in our northern climate. We have always said that a larger frame would be preferable farther south, at least it is our opinion that it would be preferable. We guess you mixed that a trifle, when you said our bees were brooding sticks. The fact is in this cool backward spring, our bees are in the best possible shape for keeping up the animal heat for developing brood, and there is no sticks in the centre of that brood. After our stocks become strong and numerous, and the weather becomes warm or hot, then our sticks or division in the centre of the frame is not one particle of detriment in practice, although it appear to be in theory.

To-day, April 15th, 1872, the spring has come in cold and backward. No natural pollen yet, and no forage from natural sources. Now you know some of our reasons for small combs.

ELISHA GALLUP.

Orchard, Mitchell Co., Iowa.

Dzierzon says, "the first day the bees fly in spring is a day of great jubilee for me;" I trust it is for the many readers of the Journal. HULLMAN.

THE AMERICAN BEE JOURNAL.

Washington; June, 1872.

All communications and letters of business should be addressed to

GEO. S. WAGNER,
Office of the American Bee Journal,
WASHINGTON, D. C.

With this number closes the 7th volume of the American Bee Journal. We think this a fitting occasion to return our thanks to those kind friends who have stood by us, and so efficiently aided us in conducting the Journal since the sudden death of its late editor. Called so unexpectedly to assume the charge of the Journal, and burdened with many other weighty duties, we would have been unable without their aid to conduct it.

The Journal will in the future pursue the same independent course that it has in the past, seeking the true development and improvement of bee-culture in this country; and will continue unhesitatingly to expose whatever it believes to be fraud and deception.

We doubt whether any class of interests have suffered more in this country than bee-culture, from the intrigues and deceptions of designing persons, and the only way to defeat the plans of these persons, is exposure. It is disagreeable, and at times painful, but is nevertheless a positive duty of a journalist who desires the true and complete development of the cause he advocates. Mere personal controversies we deprecate, and shall endeavor to close the columns of the Journal to all who seek to engage in them.

Although the beekeepers of this country have during the past winter sustained heavy losses, it is gratifying to know that few intend to abandon bee-culture. The great majority are going to try again, thinking that they have discovered the cause of their troubles. We trust they have, and will not again be called upon to meet such heavy losses.

The many friends of Dr. Bohrer will be pained to learn of the calamity with which he met when just about leaving for Europe, and which has resulted in his abandoning his trip, and will join with us in hoping that his new venture will prove more successful.

Rev. Mr. Langstroth, we are happy to inform the readers of the American Bee Journal, has safely reached his home in Oxford, Ohio. His foot is healing rapidly, and we hope soon to hear of his being able to throw aside his crutches, and have again the full use of his foot.

The locust trees in this city are done blossoming. While in blossom, they were alive with bees. The Linden is just coming into blossom.

A prompt renewal of subscriptions and payment of arrearage, would be of great aid to us at present.

In answer to many inquiries, we would say, that we are unable to furnish complete sets of the present volume of the Journal, the supply of the July and January numbers being exhausted. Having moved from our former residence, we have been compelled to pack up all the back numbers of the Journal, but shall keep a list of those desiring them, and will send them before long.

We will, during the coming month, send bills to all in arrearages, and shall expect a prompt settlement. All subscriptions must be paid in advance; no Journals will be sent after the expiration of the time for which the subscription has been paid.

[For the American Bee Journal.]

Chautauqua Beekeepers' Association.

The 5th semi-annual meeting of the Chautauqua Beekeepers' Association met at the American House, Jamestown, N. Y., Tuesday afternoon. J. M. Beebe, President. Notwithstanding the very unfavorable weather, and the almost impassable condition of the roads, a good number of beekeepers were in attendance. The first subject for discussion was wintering bees. As many persons had lost a large portion of their stock during the past winter, they were naturally anxious to learn the cause, and ascertain the proper remedy.

Mr. Beebe stated that he had lost two weak swarms only; had thirty swarms last fall. He had constructed a house to winter his bees in, costing him \$110, but he preferred to winter them upon their summer stands. He fed stocks deficient in stores; thought all should have 25 lbs. each to be safe, although the less honey they consume the better. His feed is sugar syrup; to 10 lbs. of coffee sugar add 5 lbs. of water, and let it boil five minutes.

Mr. Cook started with 70 swarms and lost one-tenth. The winter he regarded as a very hard one, owing to the excessive cold, intermingled with frequent warm spells. He fed the same as Mr. Beebe, only he mixed honey with the syrup.

He gave upward ventilation. The most of the swarms he lost, he attributed to honey dew, causing dysentery. There is usually about six weeks of honey season proper, but only four last year. He considered last season as the worst for the beekeepers he ever knew, *but even then the investment paid.*

Mr. Phillips lost 44 swarms out of fifty. He wintered a part out of doors, a part in the cellar, and the rest in the kitchen. He lost the most in the kitchen. Gave ample ventilation, had no dysentery or foul brood in his young swarms. All the stocks that died left an abundance of honey. In reply to a question as to the quality of honey in California, where he had resided for many years, he stated that it was as white and

nice as here, and that the white mustard was to honey producers there what the clover is here.

Mr. Joseph Cook lost ten swarms out of 44. He considered the past winter a hard one for the bees. This was the first lost in wintering he had met with, but he attributed it in great measure to his failure to properly care for them.

Mr. Henry Whilford lost eight swarms out of 29. Gave too much upward ventilation. He thought it a good plan to put something inside the hive for the bees to fall on, so they could return to the cluster. In response to a question, he stated that combs moulded in this climate long before the bees perished. He favored wintering bees in a house built for the purpose. The winter was a severe one for beekeepers.

Mr. Beebe stated that he had obtained 216 lbs. of box honey, and a new swarm from one old one, in a single season. He offered to wager that he could in any season make *more net profit from fifty swarms of bees, than could be made in the same season from thirty cows.* He favored Italians to the native black bees. He preferred artificial swarming where increases of stock was desired. Thought natural swarms produced the most honey.

Mr. Campbell had taken 104 lbs. from one swarm, leaving them enough for winter.

Mr. Grout obtained 85 lbs. a week from each hive from each swarm by using the mel-extractor.

Mr E. H. Jenner had invested \$75 in bees, but had never realized \$5 worth of honey. Used the box hive, but should do so no longer. In reply to a question, Mr. Beebe said he would prefer to transfer swarms now, or else wait till 21 days after swarming, because there was less brood at these two seasons. If now, make the transfer in a warm room. There was considerable interest in improved hives, several leading kinds were represented. The Beebe hive was unanimously considered to be the very best hive now before the public. The past winter had firmly established the fact, that it was unequalled for safe wintering bees upon their summer stands. The simple yet efficient arrangement of the comb frames received commendation. Cheapness of construction, perfect adaptation to the wants of the beekeepers, combined with complete control secured over the bees are a few of the superior merits of the bee hive.

After listening with interest to an address by Mr. Albert M. Cook on the History and Use of the Honey Bee, the association adjourned to meet at Mayville, Tuesday, September 8d, 1872.

HERBERT A. BURCH.

[For the American Bee Journal.]

Dr. Bohrer's Trip to Europe.

MR. EDITOR.—Inasmuch as it was announced in the columns of your Journal for April, that I was going to Italy for the purpose of importing Italian queens, and as it is now evident I cannot go, I deem it but justice to such as contemplated obtaining imported queens through me, as well as to myself, to explain why I am not going this season.

On the morning of the 13th of the present month I was about to complete my arrangements for the trip, when the cry of fire attracted my attention in the direction of my dwelling. It was on fire, and was, together with much of my household goods, consumed. This, of course, turned my family into the street, and compelled me to remain at home and rebuild. But if the beekeepers of the country desire it, and will send me their orders by the time the North American Beekeepers' Association meets at Indianapolis, in December next, I will start to Europe about the first of April, 1873, so as to get back to this country by the first of June. I think I can deliver the queens in New York in good order, and send them from there to the end of their journey for \$12 each, which is much lower than imported queens usually cost, as they are badly packed, kept long on the route, and are roughly handled; owing to which a large majority of them perish on the way. Aside from this, many of them fall far below the recognized standard of purity, and consequently cannot give breeders or their patrons satisfaction. These difficulties, which are so exceedingly annoying to beekeepers, I propose to remedy, if it is possible to do so, by selecting foreign queens in person, and taking charge of them on their journey as far as New York, at which point they will not be detained but a few hours, as they will be so packed as to be forwarded to their destination without repacking, but will remain in the original packages. The reason why I wish to have the matter determined by the 10th of December is, that it may be announced, and all rest assured that the trip will be made. I wish at least one hundred orders.

G. BOHRER.

Alexandria, Ind., April 21, 1872.

I hope to get up a club for your paper, and the above names are of parties who will be likely to want it. Our county is quite newly settled, but my own and my neighbor's bees did well last season, and I think there is a growing interest in the culture which I should like to see encouraged.

I sowed twelve acres of alsike this spring, and though the old fogies' cry "can't raise it" has been sounded in my ears on all sides, I have the satisfaction of seeing a good stand and the weather most favorable for its growth. I have no doubt that with the addition of this pasturage to that of the wild flowers they will store plenty of honey.

N. H. S.

West Point, Neb., May 13, 1872.

[For the American Bee Journal.]

I promised to report this spring how my bees wintered. It nearly makes me sick to think of the fatality of the past winter among bees in this country. Out of forty-seven strong stocks and one weak one I have but ten left, and some of them very weak. Bee cholera the cause. But I do not feel like giving it up yet, so I have dought some more and am going to try again, and do what I can this season in making up my loss. * * * I was truly sorry to hear of the death of our editor.

JONATHAN SMITH.

Willow Branch, Ind., April 24, 1872.

A. GRAY, 1871.
Formerly of Bely, O.

J. W. WINDER,
Of Cincinnati, O.

IMPORTERS & BREEDERS OF

ITALIAN QUEEN BEES.

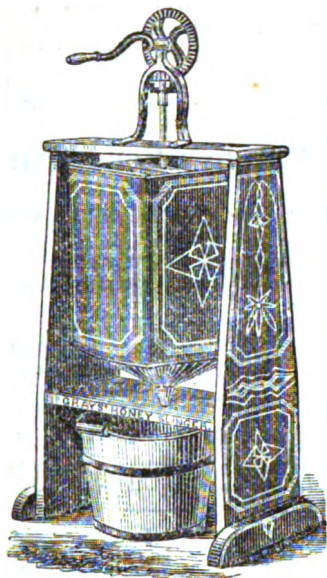
We would respectfully announce to our bee-keeping friends of America, that we have our arrangements completed to breed our Queens in Ludlow, Kentucky, opposite Cincinnati, isolated from all impure stock; which is a great advantage to our patrons as well as to ourselves.

Our Queens will be bred from imported stock, from the apiaries of Dr. Blumhoff, Prof. Mona, and Edward Uhle, of the highlands of Italy. All our Queens sent from the apiary are **WARRANTED PURE**, and satisfaction guaranteed.

Prices to suit the times.

April, 1871.

GET THE LATEST!



GET THE BEST!!

GRAY'S HONEY SLINGER.

(Patent applied for.)

This mel extractor is now perfected and offered to the bee-keepers of America for the first time. This machine is made of heavy tin, and well painted or japanned (except the wood work). It is very light, and can be sent by Express, without packing. It was exhibited for the first time at the Cincinnati Convention of Bee-keepers, and was very highly recommended by all the bee-keepers present.

April, 1871.

WAX EXTRACTORS.

We also manufacture this new apparatus for extracting Wax from old and worthless combs, which has now been fully tested. Mr. A. Grimm writes us that he has extracted two hundred and six (206) pounds of the nicest Wax he ever saw, although some of the comb was from ten to twelve years old; and that the bee-keepers of America owe Mr. Gray many thanks for importing and introducing so useful an invention. Every apiarian should have one of these Wax Extractors.

For further information of the above machines, send for descriptive circular, free.

Address,

GRAY & WINDER,

132 West Fourth Street,

Cincinnati, Ohio.

April, 1871.—Gms.

PRICES OF BEES AND QUEENS,

For the Year 1871.

FULL COLONIES OF ITALIAN BEES, with tested pure Queens of last summer's raising, in a Langstroth movable comb hive, for 8 frames full of comb, and honey enough to last until May 20th, I will deliver at the Express office at Jefferson station, between the 20th of April and June 1st, for \$15 each.

Six Colonies for \$14 each.

Ten Colonies for \$135.

Twenty Colonies for \$250.

Any number above twenty at \$12 each.

ITALIAN QUEEN BEES, whose worker progeny has hatched in my apiary, and shows by its marking that they have met with an Italian drone, I will sell at the following prices:

If sent from April 20th to May 6th, \$8; May 5th to June 1st, \$7; during the month of June, \$6; during the months of July, August, and September, for \$4. If from ten to twenty queens are ordered, a reduction of 10 per cent. will be made; if above twenty, a reduction of 20 per cent. Untested Queens, whose purity I guarantee, I will sell after June 25th for \$2.50 each.

All Queens will be sent by mail post-paid. The box or boxes in which the Queens are sent must be opened in presence of the Postmaster, and a certificate from him must be sent by return mail, if one or more of the Queens should have died during shipment; on receipt of this certificate from the Postmaster, another Queen will be sent, or the money refunded.

YOUNG SWARMS OF ITALIAN BEES, medium sized, with a tested pure Queen of last summer's raising,—sent in a common shipping box, with feed enough to stand the journey,—if shipped before June 25th, will be sent for \$9; between June 25th and July 10th, for \$8; from July 10th to August 1st, for \$7; and after that time for \$6.

All claims on account of impurity of Queens or Stocks must be made within 40 days after receipt of Stocks or Queens, or they will not be noticed.

In some cases, where claims are made on account of losses incurred during shipment, I will demand an affidavit setting forth the facts in the case, before I will satisfy the claims.

Safe arrival and purity guaranteed in every shipment. The cash must accompany every order, or it will not be noticed.

ADAM GRIMM.

Jefferson, Wis., April, 1871.

A Nut for Novice & Co.

This 4th day of March, when examining my stocks, I found No. 10 had a large quantity of brood in all stages. The nut to be cracked is this: I could discover only one queen, and yet of the three dozen workers which I saw hatch out, there were some three banded, some two banded, and some no-banded. Will Novice, Gallup, and Grimm, each be so kind enough to give his individual opinion in the next number of the American Bee Journal, why the worker progeny of a queen, hatching all at the same time, are so differently marked; and oblige
TYRO.

Advertisement.

Territory for the "THOMAS' HIVE," in Illinois, Iowa, and Missouri, can be obtained of

PALMER BROS.,
New Boston, Ills.

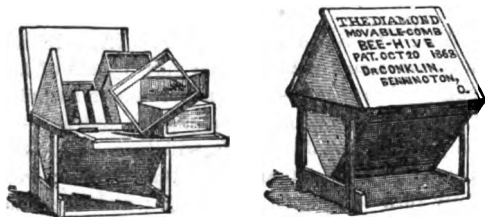
Send stamp for circular.
April, 1871.—3ms.

Italian Queen Bees.

I shall breed ITALIAN QUEEN BEES for sale the coming season, from Imported Mothers of undoubted purity. My patrons may rest assured of being honorably dealt with. Orders solicited. Send for circular.

WM. W. CAREY,
Colerain,
Franklin Co., Mass.

April, 1871.—5ms.



The NEATEST, CHEAPEST and BEST

SUMMER & WINTER HIVE,

Securing the straightest combs in the Frames, and the easiest frame to remove, with the largest space for surplus boxes, is the

DIAMOND FRAME HIVE.

Hives and Territory for sale.

Send stamp for Circular and Price List of Pure Italian Queens, Bees and Hives.

DR. A. V. CONKLIN,
Bennington, Morrow Co., Ohio.

ITALIAN BEES.

Full Colonies in spring and fall; and Queens throughout the season. Circulars sent free.

Address, **R. M. ARGO,**
Lowell,
April, 1871.—3ms. Garrard Co., Ky.

ITALIAN QUEEN BEES FOR 1871.

I would respectfully inform my former patrons, and all others who wish to procure highly-colored and prolific Queens, that I am prepared to fill all orders for TESTED or WARRANTED QUEENS, without delay. Queens raised in full colonies. Satisfaction guaranteed. Circulars for 1871 sent free. Address,

GORDON BOUGHTON,
P. O. box 74,
Illioopolis, Ills.

April, 1871.—6ms.

R. R. Murphy's Honey Extractor.

The best, most durable and cheapest geared machine in the market. It will empty more Honey, with the least injury to the comb, in the same length of time, than any other machine now in use.

Send stamp for terms. Address,
R. R. MURPHY,
April, 1871.—2ms. Fulton, Ills.

(ADVERTISEMENT.)

ITALIAN QUEEN BEES.

One home-reared Queen and the American Bee Journal one year for \$6; or one Queen without the Journal for \$5.

Price of imported Queens regulated by cost and loss in importing.

Circulars sent free. Address,
H. NESBIT,
April, 1871.—tf. Cynthiana, Ky.

COMB GUIDE PRESS.

With this instrument a child can put Wax Comb Guides on twelve frames in five minutes.

Price of the instrument, delivered at the Express office, \$1.25. Send stamp for a sample.

COMB-FASTENING PRESS.

This implement fastens quickly and substantially Dry Combs, or Comb Foundations, in the frames. Price, \$2.

Comb-Guide Press and Comb-Fastening Press, together, \$3. When ordering, send the inside length of the top bar of your frames.

Patent solicited.
CH. DADANT,
April, 1871.—tf. Hamilton, Ills.

WM. H. FURMAN,
Breeder of Pure Italian Queens

and Proprietor of the

Right of the Langstroth Hive for Iowa.

I have been engaged in Breeding Pure Italian Queens for the market for the last twelve years. My prices are as follows :

One stock of Italians with Langstroth hive,	\$20
One stock with farm right of	25
One Queen warranted pure Italian.....	5
Three " " " "	18
Five " " " "	20
Thirty " " " "	100

Orders filled for Honey Extractors and Knives.
(See Circulars.)

I may have a large lot of Queens *fertilized in confinement* at a heavy expense. For these my terms are as follows :

One Queen under care of Dr. N. C. Mitchell, \$18
One Queen under care of Mrs. E. S. Tupper
or Mr. Win. King, each \$50

Please do not send orders for these too fast.

Address, WM. H. FURMAN,
Cedar Rapids, Linn Co., Iowa.

ITALIAN QUEENS FOR 1872.

I shall sell queens at the following prices for the coming season :

For 1 queen.....	\$4 00
" 2 "	7 00
" 3 "	10 00
" 5 "	15 00
" 12 "	30 00

Nuclei hives, with four frames each, one pure queen, feeder, queen cages, and fumigator, \$5.00.

All queens warranted pure bred from imported mothers and in full colonies. Send for circular.

Address, H. ALLEY,
Ap., 1872—tf. Wenham, Essex Co., Mass.

PURE ITALIAN QUEENS.

Bred from pure and selected mothers, and progeny pure and tested in my apiary. Send by mail, safe arrival guaranteed.

A. SALESBURY,
Ap., 1872—tf. Camargo, Ill.

ITALIAN BEES FOR SALE.

50 hives pure Italian Bees for sale. Ten hives for \$100, if taken this fall; or twenty-five per cent. higher next spring.

For particulars address,

Nov., 1871.—tf. W. WOLFF,
Jefferson, Wis

LANGSTROTH'S BEE HIVE.

I have for sale a lot of Langstroth hives, well made and primed, which I will sell at \$4.00 per hive. In lots of twelve or more, at \$3.75.

CHAS. F. MUTH,
976 & 978 Centre Avenue,
June, 1872—2 mo. Cincinnati Ohio.

PRICES CURRENT FOR 1872

—or—

IMPORTED ITALIAN QUEEN BEES.

Encouraged by the results of last year we have again made arrangements for the supply of genuine, fertilized queen bees, from the same apiary in Italian Switzerland.

Our central position enables us to forward Bees to America with a much better prospect of safe arrival than is possible when sent direct from the European continent.

We repack these queens with other companion bees, furnish honey in the comb for the journey, and forward by the swiftest steamers to New York (freight paid), at the following prices :

	£. s.
In April and May, eight queens . . .	6 10
twelve "	9 10
In June, eight queens	6 4
twelve "	9
In July and August, eight queens . . .	6
twelve "	8 8
In September and October, eight queens .	5
twelve "	7

The money must accompany the order, and as the United States post offices now issue money orders payable in London, greater facilities are offered for safely remitting. Our quotations are made in English money.

Queens can only be sent in parcels of eight, twelve and upwards. Every care will be exercised to insure safety, but all risk will be incurred by the party ordering.

It is a satisfaction to us to see in the February number of the American Bee Journal that a correspondent, to whom we sent a parcel of queens last year, writes thus : "to our surprise and joy we found every queen alive."

Letters containing remittances will be acknowledged by return mail and advice sent of the parcels being dispatched.

Orders executed in rotation.

Address,
GEO. NEIGHBOUR & SONS,
Apiarists,
149 Regent street, London, W.

IF A few volumes of scarce old Bee Books on sale. A list will be forwarded on receipt of stamp.

April, 1872.—6 mos.

ITALIAN QUEEN BEES.

After eleven years' experience in propagating Italian Queens and sending them to nearly every State in the Union, patrons and others are informed that I have made arrangements to propagate on a large scale the coming season ; consequently the price will be low. My propagating mothers are from the best districts in Italy. All queens sold by me are warranted pure and fertile. I will sell a few good swarms with young queens in Langstroth Hives for \$10 each, or \$12 with my new surplus arrangement. Send for circular.

W. W. CARY,
Colerain,
Feb. 15, 1872. Franklin Co., Mass.

B. B. Murphy's Improved Honey Extractor.



The best, most desirable and cheapest Geared Machine in the market. It will empty the most honey with the least injury to the comb of any machine in the market. Also the best honey knife in use for uncapping comb with inequalities in it.

I am also manufacturing all kinds of Honey Boxes and Frames from white pine, on short notice, as the cheapest. Please give name, P. O. and Co. plainly written to avoid mistakes.

Send stamp for terms, etc.

Address, B. B. MURPHY,
Fulton, Whiteside Co., Ills.

May, 1872—6mo.

CHESTER WHITE PIGS.

A few pair of pure Chester pigs from 4 to 8 weeks old, at \$15.00 a pair, one half former prices.

Address,
W. H. FURMAN,
Cedar Rapids, Iowa.

May, 1872—tf.

SECTIONAL SURPLUS HONEY BOX.

After ten years' practical experience with the Sectional Honey Box, I feel fully warranted in recommending it to the beekeeping public as having no superior.

Bees will store thirty per cent. more honey, which will sell thirty per cent. higher in market than in the common six pound box.

It is better adapted for the use of the honey slinger than the movable comb frame, made to dovetail together without the use of nails or screws. A child can put them together rapidly.

Illustrated circular sent on application, sample fifteen pound box sent by express for 35 cents, three for \$1.00.

H. M. JOHNSON,
Marshall, Mich.

May, 1872—3mos.

VOYAGE TO ITALY.

I have associated with the Italian Bee Co., of Des Moines, Iowa, in the importation of queens, from the best apiaries of Italy. By this arrangement I shall go to Europe, arriving in Italy about the last of July. I shall buy and pack the queens myself, attending to all the details in person, and am confident I can get them here safely with small percentage of loss.

We undertake this, assuming the risk and expense, for the purpose of stocking our own apiaries. If any one desires to send by me for queens, they can ascertain cost, &c., by addressing the Italian Bee Co., Des Moines, Iowa, enclosing stamp.

CH. DADANT.

May, 1872—1t.

NATURAL, PROLIFIC ITALIAN QUEENS.

A pure, tested Italian queen, warranted, with guarantee of safe arrival, \$5 each.

A pure Italian queen, sent as soon as fertile, without guarantee, \$1.50 each; three for \$4; four for \$5.

They are more prolific, live longer, and their workers live longer, are more industrious, and in same season and locality will lay up more surplus honey than workers of artificial queens.

Extract from a letter, dated April 4th, 1871:

While I differ entirely from you on this point—Natural v. Artificial Queens—I still think your plan a good one for getting choice queens.

L. L. LANGSTROTH.

The cash must accompany every order. Send early to secure, as I shall raise only a limited number this season.

JOHN M. PRICE,
Buffalo Grove, Iowa.

Feb., 1872—6mos.

PURE HONEY WANTED.

The subscribers will purchase, or will receive, to sell on commission, any quantity of new honey, and in any form, if pure. Do not wish to buy or sell any sugared honey.

D. S. HEFFRON & CO.,
193 Washington St.,
Chicago, Ills.

Aug., 1871—tf.

EARLY QUEENS.

A few pure and prolific Italian Queen Bees, bred last summer in the Switzerland of America, for sale in April next, or earlier, at fifteen dollars each. "First come, first served."

Northern correspondents please address, "via Washington, D. C.,"

W. C. CONDIT,

Howard Springs, East Tennessee.

Jan'y, 1872—3 mos.*

ITALIAN QUEEN BEES.

Send stamp for my New Circular for 1872 containing prices of Pure Italian Queens from my direct importations. Full colonies of Italian Bees. Alsike clover seed, &c.

T. B. HAMLIN,
Importer and Breeder of
ITALIAN QUEEN BEES.

Edgefield Junction, Davidson Co., Tenn.

May, 1872—tf.

A GREAT CHANCE FOR AGENTS.

Do you want an agency, local or travelling, with an opportunity to make \$5 to \$20 a day selling our new 7 strand White Wire Clothes Lines? They last forever; sample free, so there is no risk. Address at once, Hudson River Wire Works, cor. Water St. and Maiden Lane, N. Y., or 16 Dearborn St., Chicago Ill

Sep. 1871. 1t

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VIII.

JULY, 1872.

No. 1.

[For the American Bee Journal.]

Unedited Letters of Huber.

JANUARY 20, 1801.

SIR:—I have this moment received your letter of the 10th. I will not reply to it now, but wait until after I have received your promised letter. I admire your skill in manipulations, and your sagacity; which gives me hope that the history of the bee may be pursued further. Study constantly the book of nature, it will teach you more than all the romances that have been written on the bee. You understand, Sir, that this little memoir is only for your eye.* I have counted upon your indulgence in writing it, and do not wish it to go out of your hands, as I hope someday to publish these observations. I have the honor to be yours very devotedly—

F. HUBER.

P. S.—I see by your letter that you have anticipated the doing away with the bottom piece of the frames of the leaf hive. It was only after long experience that I felt the inconvenience of full frames. The cross piece that I put in the middle of the frames should be narrower than the upright pieces. It may be an inch in breadth and a quarter of an inch in thickness.

To compel the bees to build their combs parallel to the small side of the hive, it is not sufficient to put a piece of comb in one of the frames; success is more surely attained by cutting a clean old comb in pieces, six inches long by one or two broad. Fasten the first piece firmly in the top of the third frame; the second in the sixth; the third in the ninth frame, &c.; continue in this order if the hive have more than ten frames. You must also put several pieces of comb in the hives such I sent you a model of. (Translated by Dr. Ehrick Parmley.)

The first edition of Huber's work on bees (*Nouvelles observations sur les abeilles*) was published in 1792. It has plates which show very clearly the construction of his hive. The tops and bottoms of his frames (called by him *leaves*) were about an inch and a quarter wide, and were dovetailed to uprights of the same width, thus making them close fitting, so that when put to-

* This letter was at the close of the memoir we are about to present.

Hamet.

gether they formed the hive, the ends being closed with glass darkened by shutters.

The second edition, edited by his son, was published in 1820, and although it contains much new matter, especially on the architecture of bees, it uses the same cuts of the hive with the first edition. But for these letters which have so unexpectedly come to the knowledge of the bee-world, we should never have known that Huber made or even contemplated any changes in the construction of his hives. In the June No. of the Journal, his reasons for dispensing with the hinging of his frames were given, and now we find him discarding the bottom pieces of his frames. To those who have no experience of the slow advances usually made in inventions, it may appear almost unaccountable that Huber did not, from the very start, see how greatly the close fitting bottom strips impeded the manipulation of his frames. As no smoke was used in pacifying the bees, nothing but the indomitable courage and patience of a Burnens was equal to the task of managing such a hive.*

The method employed by Huber of fastening his guide combs by small pegs, was far inferior to the subsequent device of securing them by melted wax, or a composition of melted rosin and bees-wax.

The Abbe Della Rocca, whose work on bees in three volumes (*Traité complet sur les abeilles*) was published in 1790, used at first methods still ruder than those of Huber. His recommending the placing of a sharp angled edge on the under side of his bars would seem to be an anticipation, in the date of publication at least, of the device of the celebrated English surgeon, John Hunters, who in a memoir read in 1792 before the London Royal Philosophical Society, advised the use of a salient angle or bevelled edge, to induce bees to build their combs in any desired direction.

L. L. LANGSTROTH.

* In his preface, Huber thus speaks of his assistant: "It is impossible to form a just idea of the patience and skill with which Burnens has carried out the experiments, which I am about to describe. He has often watched some of the working bees of our hives, which we had reason to think fertile, for the space of twenty-four hours, without distraction, and, without taking rest or food, in order to surprise them at the moment when they laid their eggs."

Profuse Blossoming of the Locusts.

On the last day of April, 1871, a very severe frost so injured the common locust (*Robinia Pseudacacia*), that it blossomed very sparsely in southern Ohio. This year it has blossomed very profusely, and with suitable weather would have afforded a large yield of honey. Cool, wet and windy weather has, however, made it of very small service to the bees. In 1861 some of my strongest stocks gathered 50 pounds from this source. L. L. L.

Color of Italian Queens.

As few of our readers have access to our article on this subject, published originally in the *Rural New-Yorker*, we reprint it with some additional remarks.

THE BEEKEEPER.

On the Color of Italian Queen Bees.

EDS. RURAL NEW-YORKER:—It is a fact well known to breeders of Italian bees, that the color of the queens raised from a pure mother is far more variable than that of the workers. Some of the queen progeny of females brought from the districts in Italy where none but the pure race are found, have abdomens of a brilliant yellow, the tip alone being of a black or brownish color; others have only one or two yellow rings, while others again are even darker than common queens.

Various theories have been advanced to account for these facts. Dzierzon and other Germans are of the opinion that none of the Italian bees are absolutely pure, but that all have a *taint* or *dash* of black blood, which can only be got rid of by a long course of careful breeding. After ten years of assiduous labor, he does not claim to have entirely overcome this taint, but thinks he has purer bees than can be found in Italy, and that in ten years more he will be able to breed out all traces of the black blood.

Some attribute the tendency to sport in color to a *mysterious* influence exerted upon the queen larvae by the hybrid or black nurses by which they are often reared. Mr. Kirby believes that their larvae are fed with the *semen* of black or hybrid drones, and in this way obtain a taint of the black blood!—a theory which must be rejected, not merely because it appears contrary to all analogy, but because it is directly contrary to facts. The same tendency to sport has been noticed in districts where no common bees are found; and the queen larvae of black bees, when entrusted to Italian workers, are not found to have any traces of the Italian blood. Moreover, those breeders who persist in rearing their queens in colonies of black or hybrid bees, are now, after an experience of four seasons, able to secure as large a proportion of beautiful queens, as when they first began to practice—a result which could not be obtained, if, according to Mr. Kirby's theory, they had been getting further and further from the pure blood.

I shall communicate to your readers some facts which seem to me to throw considerable light upon this perplexing subject, if they do not fully account for all its difficulties.

In May, 1862, I reared a number of very beautiful queens from a brilliantly colored Italian mother, and for some time all her progeny were of this type. After a while some of her queens were small and poorly colored. I now began to suspect that the condition of the colonies in which the queens are reared might have a decided effect upon their color, as well as their size, and was the more confirmed in this view when I subsequently obtained from the larvae of the same mother, reared in the same colonies, few but handsome queens. The first lot were raised when the nuclei, or small colonies to which the Italian brood was given, were vigorously getting both honey and pollen; the inferior ones were reared when forage was so scarce that the nuclei had to be fed. Later in the season when forage was abundant, the young queens were nearly all of the beautiful type; while later still, when the colonies had to be fed again, the color and often the size of the queens again became indifferent.

A year ago, last spring, I suggested to Prof. J. P. Kirtland, of Cleveland, that I believed the color of the Italian queens depended very much on the condition of the colonies in which they were reared; and that small and discouraged nuclei, *out of heart*, produced a largely disproportionate number of poor queens. The year before he bred his queens in very small nuclei, and was perplexed to find so many of them of an inferior quality. Using, by my advice, a box holding nearly three times as many combs and bees as the one he had been using previously, and breeding his queens when forage was abundant, he obtained last summer the most gratifying results. In a letter addressed to me, he says that nearly all the queens he raised were of a good color, while two other persons, who reared queens in small nuclei, from the same mother, had many poorly colored queens.

My experience this season, is thus far the same with that of last year—leading me to believe that I have discovered an important law upon this subject, and that queens require, for their perfect development in size and color, to be fed with all the royal jelly they can possibly consume. In queen cells, reared in large colonies during the swarming-season, a large accumulation of the jelly is often found after the queen is hatched; while in those reared in small or discouraged colonies, there is seldom found any excess of it. This season I have examined, in swarming colonies, a number of uncommonly large queen cells, and in some of them have found nearly half an inch of jelly at the base of the cell. Soon after the queens creep out from such cells, this jelly may often be found of the color and consistence of a rich quince jelly. It is very seldom that any jelly is found in the cells of queens reared in small colonies, after these queens have emerged.

As small colonies frequently attempt to rear a number of queens entirely disproportional to the number reared in large colonies, it must often happen that some of those queens are

scantly fed, and therefore imperfectly developed. I have not, however, been able to discover that queens of extra size and beauty are more prolific, or that they produce a handsomer progeny, than smaller and darker ones bred from the same mother.

L. L. LANGSTROTH.

Oxford, Butler Co., Ohio, July 4, 1861.

A few years after writing the above article, we made the experiments referred to in the May No., page 263, showing how the color of the brightest young queens can be changed by withdrawing them from the care of the bees. About the same time we had, in the month of August, a large number of queens hatch, for which we had no immediate use, and it occurred to us that we might preserve them for future use by putting them with a few bees into the small boxes used for sending off queens. The boxes were set in a cool place, each one labelled with the character of its queen for color. When we examined them, after about ten days' confinement, we were surprised to find that their beauty had sadly degenerated. From these and other facts, we learned that to be certain of retaining the color of queens after they hatch, they ought, unless in the hottest weather, to be kept in colonies large enough to secure good animal heat.

It may seem unaccountable that while the color of the young workers remain the same, that of queens should be so easily changed, but such are the facts. The deterioration in color from unfavorable conditions must not be confounded with that which often occurs in queens supposed by the inexperienced when first hatched, to be very beautiful, but which become darker under *any* circumstances. The expert breeder seldom fails, on seeing a just hatched queen, to decide what her type of color will be if she is left in charge of a good colony, and to make the proper allowance for the seeming deterioration which almost invariably precedes her fertilization. After they begin to lay, the color of Italian queens is no more subject to change than that of the workers, showing only the ordinary effects of age. The color of the most brilliant queens seeming gradually to become duller as they grow older.

L. L. L.

[For the American Bee Journal.]

Extraordinary instance of Sagacity in Bees.

The facts which we are about to relate, are the most interesting of all the special bee wonders which have come under our own observation. We should hardly venture to give them to the readers of the Journal, if we did not feel it to be a sacred duty for every observer to give to the world any such facts, however seemingly incredible, confident that a fact ("*factum*") in nature is a thing *done* by the All-Wise Creator, and that in due time its verity will be made apparent to all.

In the year 1864, we conceived the idea that a very strong colony, queenless and without brood from which to supply their loss, might perhaps by having only a few worker eggs or larvæ given to them, be induced to rear queens of extra size

and beauty. To such a stock, we gave a piece of comb, with suitable brood; about half an inch wide and three inches long. Examining it a few days after, we found a dozen or more queen cells begun, and with the head of a pin, removed the queen larvæ from all of them but four, and left none in any of the other cells. When those cells were all capped, we thought it would be economy to set the strong stock to work upon a second lot. As we had put the first piece of comb into a place cut out for it between one of the uprights of the frame and the comb, we put the second into a similar place on the other side of the same comb. Lifting out the combs a few days after to note progress, we were surprised to find not a single royal cell begun on this last inserted piece, and not a single larvæ in any of its cells. Looking at the piece first put in, to our amazement we found all the royal cells from which the tenants had been extracted, occupied afresh! and the cells much more advanced than at the time we destroyed their first occupants. These bees were evidently determined not to lose the labor they had bestowed on the first set of cells, and had removed to them the larvæ from the worker cells on the opposite side! The queen, by a law of her nature depositing her eggs in the proper cells, the bees have no necessity or inclination ordinarily to disturb them; and it is an exceptional occurrence for them ever to do it.

Let those who can find in all the operations of this wonderful insect in which Aristotle could see "something divine," nothing but what they call a blind unreasoning instinct, account if they can, for this unusual but wise adaptation of special means to ends which it was impossible for them to foresee.

L. L. LANGSTROTH.

[For the American Bee Journal.]

Dronings, No. 2.

1. A careful study of Mr. Grimms' article in January number, on "Rearing artificial queens, and their value," leads me to ask: Have we sufficiently reflected on the importance of having a number of pure *drones* laying Italian queens in our apiaries? Would not our main object be more speedily attained in this way than by restricting ourselves to fertile queens? Fill the air as he did in April with thousands of pure Italian drones, and if we have any pure queens in the apiary we almost ensure the preservation of purity, but on the other hand if we leave this matter to chance we need not expect anything but hybrids. I do not forget the Dzierson theory, and therefore do not hold out the hope than an apiary can be Italianized in one season; but I am sure that the object will be sooner reached if one works with both hands as it were.

2. Mr. W. J. Davis does good service in counselling a more careful and systematic culling of our hives. We are too greedy as a general thing—too anxious to multiply stocks—to save suspicious hives. Now, in my humble judgment, it is worse than lost time to be feeding weak stocks. Double them, triple them, and then feed, if you

please, for you will have some chance of compensation for your time and trouble. And then about foul-brood, don't waste your time smoking it with sulphur, or weary yourself in vain by walking over to the "thread-factory" to dip the frames in hyposulphates and chlorides, and then indulge the false, perhaps fatal hope that the foul thing is done for, but treat them as every wise farmer treats a sheep-killing dog, or a glandered horse,—crush, burn—*utterly destroy*—and then you may have some hope that you may have exorcised the fell spirit; but tamper or temporize with it, and the chances are as 100 to 1 that the whole body *aptetic* will soon be hopelessly and ineradicably tainted. *Apropos*: May not those addled eggs (of which Leuckart writes so observantly) furnish in their putrid embryos, the seeds of death instead of the germ of life? May not this be, after all, the fountain of foul-brood?

3. I wish I could feel the flush of the prophetic enthusiasm which already hears the hum of the "coming bee;" but I fear we have to pass through "many varieties of untried bee-ing" before that avator arrives. Nature is too jealous of her glorious handy-work to yield at once to "idle dreams" and empirical exchanges. As Tennyson sings,

"So careful of the type she seems,
So careless of the single life,"

that many long years of systematic and scientific efforts must be made with an energy and perseverance that countless failures cannot daunt before we can even hope for that "fixity" which shall assure us (as orator Phillips might say, if he were of our craft) that we have at last obtained the full and perfect bee which shall exhibit in one glow of *banded* beauty the loveliness of Italy and the fecundity of America! (Very fine, isn't it?)

4. Coming down to practical matters, I wish to say a few more words about the best form of receptacles for surplus honey. I have already spoken of the English glassess. As these may be rejected on account of cost, let me call attention to the principle of Mr. Colvin's honey chambers. These chambers are (as some of the readers of the Journal doubtless know) nothing but boxes of the same size as the hive below, with seven frames somewhat wider, and each frame containing two movable sections. When these are filled with honey they can be easily removed, the wooden frame protects the honey (about two pounds in each section), and by judicious packing in boxes made specially they can be transported unharmed for any distance. These sections can be made of any size and placed in the lower as well as in the upper hive, vertically, I should advise, so as to avoid too many beginnings of combs. The reduced size, say seven by eight, of the combs would make them more salable, whilst the cost of renewal would be slight.

5. Are we going to "give it up so" about that substantial testimonial to our real king-bee (not H. A.), the venerable and well deserving Langstroth? Are we so ungrateful that we can forget the inestimable service he has done to our cause? can we forget that out of a mere pas-

time he has made a science? That by his skill and observation he has given a profession, and brought profit to thousands? Shall we, above all, by our lukewarmness strengthen the hands of his enemies who are seeking to embitter the short remnant of his days, and would, if they could, hound him to his grave. Don't tell me that he got up in open convention and begged that nothing more might be done. Of course he did! and anybody with a tithe of his modesty would have done the same thing. And even if it were right to stop them, it seems eminently right to begin again now—his veracity, his honor, his fair name which he values above all things else, are assailed by the foul-brood of our community, and we owe it to ourselves not less than to him, that we should show the world we love and honor him, and how we despise and scorn his traducers. Come, my brethren, let us warm up our hearts to a movable frame, and prepare a solid, substantial testimonial for Mr. Langstroth, that shall in some measure compensate him. Come!

[For the American Bee Journal.]

Basswood.

MR. EDITOR. Thinking that a report of our proceedings for the past season of 1871 may be of interest to your readers, we herewith send it. We started in spring with 28 swarms of Italian bees, part of them hybrid. We have increased them to 76, chiefly by artificial swarming, with from 25 to 35 pounds of honey in each hive to winter in.

Our honey product stands as follows:

White clover,	extracted	350 lbs.
Basswood,	"	1850 "
Mixed and buckwheat,	"	650 "
Box honey,		300 "

The extracted honey we sent to Philadelphia. Our bees did not do much on white clover, but when basswood came in bloom (July 15th), the bees kept us busy emptying out honey. We were fairly swimming in honey for about two weeks. We never saw bees gather honey faster than they did from basswood blossoms. Good swarms would fill their hives in two days when they had empty comb.

Now we see the necessity of urging the bee-keepers to cultivate the basswood. There is a great quantity of small basswood trees in the woods in this section which we can get to transplant. Had it not been for basswood, we would not have got any profit from our bees.

We have built us a bee house, 12 by 16 feet, with walls of saw dust, 11 inches thick on the four sides, and 8 inches thick on the floor and overhead, with two ventilators through the floor, 5 inches square, and one in the ceiling, 6 inches in diameter.

We have 84 swarms in the house now, and there are hardly any dead bees under the hive, compared to those out of doors. We bought some bees last fall, and are wintering some out of doors, and some in the bee-house, so that we can see which way of wintering is the best.

When the thermometer was 10° below zero out doors, in the bee-house it was not below freezing, and when it was 50° out of doors, the thermometer in the bee-house rose to 37°. It ranges from 32° to 37° with the ventilators open, giving an even temperature all the time.

It seems that the rapid strides that the beekeepers of this country are making with our improved bees (Italians) and improved system of management, and the use of the honey extractor, would not give old-foggy beekeepers half a chance with their old whims and prejudices about bees.

This section of the country is a good section for bees, and we mean to improve it. We have our willow, and elm, and soft maple in the spring, which keep the bees busy. Next comes dandelion, apple blossoms, white clover, and best of all is basswood, and our fall crop is buckwheat. The bees usually gather enough to winter on, so that we have all our basswood and clover honey pure again.

West Groton, N. Y.

COGGSWELL BROS.

[For the American Bee Journal.]

The Improved Hive.

As Mr. Nesbit has made public, in the February number of the Bee Journal, what he considers as objections to my style of bee hive, I desire to reply to his article, so far as to state that every one of the features he regards as objectionable, were thought of and duly considered by me before the hive was made; and also to show *why* they are not objectionable. Having used the Langstroth and other patent hives many years, and made other styles of my own, I do not set forth the claims of my present hive without any show of reason.

Mr. Nesbit agrees with me as to the capacity needed for breeding and storing winter supplies, and then asks:

"Why does he want to go so far astray from the most successful apiarians, making his cheap hive almost double the proper capacity?"

Answer: *Of course* the extra capacity is for storing surplus honey, either to be taken out by the extractor, or in the comb. If desired in the comb, it can be obtained much faster in the main hive than in boxes or top frames.

His next objection is, difficulty in lifting out the frames.

Reply: The difficulty is purely imaginary. By removing the division board, any frame can easily be lifted; and if the hive is full of combs and bees, the division board is not needed, but its space at the top filled up with strips of wood. He represents my frame as 15½ by 19½ inches. This is a mistake, probably an oversight, caused by haste. The frames, inside measure, are 15 by 11; and I find that in lifting and turning the full frames, the combs are far less liable to break out than full combs in the Langstroth frames—they being so long that there is great weight of honey and brood between the ends; while the cross bars in my frame obviate that difficulty.

I desire in this connection to allude to two

special advantages gained by close fitting tops, namely, that in opening the hive to remove frames, light is admitted only in one place at a time, namely, where the frame is taken out. The closed tops also prevent the bees from rushing out except where the frame is lifted, and they may easily be driven back by smoke; while, with open tops, they rush out and cover the whole top of the hive.

It is true, my ox is "only a twenty-five cent one;" but I believe bees will winter better in Tennessee, or any other State, in frames fifteen inches deep, than in those only ten.

Mr. Nesbit now mentions the capacity again, but admits that it can be controlled by the division board, and claims that the same is true of the Langstroth, Triumph and other hives. I ask, why is the large capacity of my hive an objection, then? How about the forty-inch Triumph? Measured in the same way, Mr. Nesbit measures mine, it contains, in the body of the hive alone, to say nothing of the upper chamber, 4788 inches.

The objection I have to the shape of the Langstroth frame, is, that if you adjust, by the division board, to the capacity of a small swarm, you give them a space long and narrow, like the hall of a house, running from front to rear; and it is not at all suited to the needs of the cluster. But with a deep and short frame, running crosswise, you may give three or four frames in the front end of the hive, and the bees have their natural heat concentrated where they need it.

I stand at the side of the hive to open it, and find no difficulty. The tops of the frames are close fitting, but *not*, as he says, "consequently one and a half inches wider." Mr. Nesbit ought to know that one and a half inches from center to center of brood combs, is just one-eighth of an inch too much. The native bees by instinct build their brood combs exactly one inch and three-eighths of an inch from center to center. I have never observed whether the Italians allow more space, but suppose they do not.

As to placing the frame in the extractor, may not the top of the frame project beyond the wire support, and thus the comb rest on it? It does so in my extractor, and thus the "sweet job" has never come. But how about the Triumph frames, which are close fitting on three sides?

Now the cross bar objection, that it is placing *wood* where *brood* is needed. Reply: The cross bar is *not* "in the center of his frames," and the brood is all below the cross bar, as there is abundance of space there. But if the cross bar were left out of my frame, the comb would not be as liable to break as in the Langstroth frame, for the reason that the long way of the comb in my hive is vertical, and consequently fastened to the frame on both of the long sides of one entire end; whereas in the Langstroth frame it is fastened only on one of the long sides.

Mr. Nesbit now asks: "How does Mr. Condit propose to ventilate his mammoth hive?"

Reply: There is abundant ventilation provided by the two end entrances, together with the inch fly holes in the center of each end. An air space can easily be provided over the tops of the frames by resting the corner on cleats, so as to raise it an inch or two. And if it is desired

for further protection, make the sides double-walled, with an air space; it will not interfere with the essential features of the hive. But I have found no difficulty with heat.

With the best of feeling, &c.,

W. C. COKDIT.

Howard Springs, Tenn., Feb., 1872.

[From The Mail.]

Beekkeeping.

Bees well deserve to take rank among the live stock of the farm, yet it is a rare thing in this country to see an apiary of any sort or size; while in Britain a place would hardly be considered properly stocked without at least a few hives. With the exception of wintering, it is as easy to keep bees here as in the old country, and quite as profitable. Nor is the difficulty of wintering by any means insurmountable, if the nature and habits of bees are studied and accommodated.

All parts of the country produce honey-yielding flowers, and in some localities such flowers are very abundant. Where white clover, bass-wood trees and buckwheat are plentiful, you have a perfect paradise for bees, and a vast storehouse for honey. Probably there is no locality where bees may not be kept with advantage; while there can be no doubt that, in some places, they would, for the expense and trouble involved, be the most profitable stock a farmer could keep. A fair estimate of the amount of honey that annually goes to waste for want of bees to gather it, would be positively startling. There are probably two hundred thousand occupants of land, from a small holding of an acre or two to full-sized farms, in the province of Ontario, and if each of these raised but fifty pounds of honey per annum, it would add a million dollars to the aggregate value of our provincial products. A single hive of bees, well-managed, may be counted on to yield fifty pounds of honey every year. Indeed, many beekeepers now-a-days would scout that as a very small yield. Single colonies have produced from four to ten times that quantity in a single year. Still, an average of fifty pounds is far beyond what ordinary beekeepers obtain, simply for want of knowledge and skill. In no department of rural affairs has greater progress been made of late years than in beekkeeping, though but few comparatively have kept pace with the onward march of things in agriculture.

We supposed just now that every occupier of land, from an acre to five hundred acres, kept a single hive of bees. But why should he not keep half-a-dozen or a score? And why should not every person possessed of a garden, however small, have one or more bee-hives in it? We have known bees kept profitably on the roofs of buildings in cities. At present, and for some time to come, there is no danger of overstocking the country, while it is undeniable that enormous waste is going on through neglect of this branch of rural industry.

Fear of being stung is probably the great hindrance to beekkeeping becoming more general. A bee-sting is no joke, it must be acknowledged. It is a rather more serious affair than a mosquito bite. But there is far less danger of being stung than most people imagine. The common idea, whenever a bee is seen, is that it is very hazardous to be near it. Many think every bee they meet with is intent on stinging them if they can. But the reverse of this is the fact. "The little busy bee" has other and better business on hand than to be stinging people, and rarely if ever, does this without provocation of some sort. If struck at, as it too often is, it will surely retaliate. If interfered with in any way, and particularly if irritated, squeezed, or crushed, it is sure to sting. That good Bible rule, "study to be quiet and to mind your own business," is especially to be observed when among bees. In all operations that expose one to bee-stings, there are simple precautions by taking which all danger may be avoided. A few puffs of smoke from a bunch of burning rags, a pan of chips, or a bit of rotten wood, will usually quiet a colony of bees, so that it can be handled with impunity. A veil of some sort, and a pair of sheepskin gloves, will completely guard an operator from the much-dreaded stiletto of the little honey gatherer.

We shall return to this subject ere long. Meanwhile, in addition to the advice to all and sundry to *keep bees*, we beg to add a few very useful counsels.

1. Do not go headlong nor wholesale into this or any other branch of rural industry. Be content with small beginnings, and take time to gather experience. Commence with one stock of bees, and before you buy even one, get some recent treatise on beekkeeping, and "post" yourself, at least in regard to the outlines of aparian science.

2. Begin with a movable frame hive of some sort. Bees have been kept advantageously, and may be still, in straw or common box hives; but to attain the best results, a movable frame hive is necessary. This kind of hive admits of access to the bees, control over them, and from one season's observations in such a hive more may be learnt about bees than by keeping them twenty years in straw or box hives. Such a hive as now recommended, can easily be obtained from some of our provincial aparians, such as Thomas of Brooklin, Mitchell of St. Mary's, Losee of Cobourg, Nicolle of Lindsay, &c. A single stock in such a hive will cost about ten dollars, inclusive of patent right, and surely this is not an investment, to begin with, that need frighten anybody.

3. Do not expect sudden and wonderful profits, nor be discouraged by reverses. There is no speculation in beekkeeping, any more than in any other branch of moral economy. But, after some years' experience, we firmly believe there are few directions in which labor and money can be judiciously expended with more satisfactory returns than this. Here, however, as elsewhere, diligence, care, energy, and perseverance are essential to success.

Instinct in Bees.

We give below various extracts from a recent work by Prof. Chadbourne on Instinct.

"In the bee and wasp and hornet, we have the instrument for defence, the poisonous secretion, and the instinct to render them effective. But in the honey-bee, we have much more than these provisions for defence. Its instinct leads it to store honey for use in winter. We pass now the complicated but special apparatus that enables the bee to gather the honey, to consider the conditions that enable her to store it. After being gorged with honey, she secretes scales of wax under the wings of the body. This substance essential to the economy of the bee-hive, is not produced by any work of instinct, but by a peculiar function of the body. These scales of wax the bee softens, undoubtedly, by another peculiar secretion, and then fashions them into a cell that has challenged the admiration of the world.

Let us trace this process through. There is an instinct for gathering honey and, answering to it, an instrument just fitted for drawing it up from the nectaries of flowers. There is also a sack for holding it and for producing certain changes in it. There is an instinct for storing this honey and a substance secreted that can be moulded into cells to hold it. There are instruments given for using the substance to the best possible advantage, and instinct to guide in the best use of both instruments and substance.

Instinct comes in the proper place to link all these agencies together. Let a single link be wanting and all other parts of the chain are useless as a means of preserving the species. And complicated as this whole process is, it is only a part of a connected series of functional and instinctive adjustments, absolutely essential to honey-bee life, as the species now exist.

* * * *

But we may now come to consider certain social animals that cannot exist, except as communities. There is, in some species, such difference in structure and function, and instinct in individuals of the same communities, that there is a division of labor marked out, and made necessary by the very nature of these individuals. The peculiarities found in some species that make the organization of the community most efficient, are destructive to isolated individual life.

Of such animals, the honey-bee is a good example, and the best known. We have in this species, the queen-mother, the drones or males, and the workers; in the latter of which there is no power of reproduction. Without the queen-mother there could be no continuance of the species, as she alone produces all the eggs for the swarming hive.

The queen and the drone, it would seem, would alone be sufficient to secure the continuance of the species. But not so; for they do not even collect honey for themselves, to say nothing of their numerous progeny. To complete the organization of the hive, there must be another class, the workers, which shall collect

food and do all the work of building for themselves, the queen and young. The conditions for an organized community are now complete. The great mass of individuals in the hive, gain their reputation for industry by working for the common good,—for queen and drone and young,—as well as for themselves.

And to this complicated organization, the instincts of each individual are adjusted, so that each performs its part, as each organ of the body performs its office or each official would perform his part in a perfectly organized kingdom.

* * * *

Mr. Darwin thinks the wonderful instinct of the honey-bee, by which it builds cells that he acknowledges, could not be improved upon, might be accounted for in this way: The making of wax takes a great deal of honey; and so it would come to pass that those swarms of bees which build with the least wax, would have most honey left for winter, and so be most likely to live. The best builders would in this way be preserved, while all the poor builders would in time die off.

Here it will be observed that the theory does not go back far enough to account for the whole case. At most, it simply offers an explanation of the preservation of those swarms made up of the best builders. But we want to know *how the bee became a builder at all?* And how the instinct to build cells and the function of secreting wax fitted for the work began together? And how the honey-bee got along before it had either the function or the instinct, both of which now seem essential to its very existence? Then we have also to observe that it is the neuter bees that secrete the wax and build the cells; and since the neuter bees are sterile, the characteristics they possess and the skill they acquire, cannot be transmitted. All the bees that build cells and gather honey, have descended thousands of years, at least, from parents that never did anything of the kind.

Now this, Mr. Darwin would probably say was a case of correlation. That is, it is true the parents do not do these things, but these powers of the neuters are so correlated to the needs of the community that the whole species become good builders by natural selection, because these swarms alone are preserved where such neuters are produced as get along with little wax and consequently with little loss of honey. He makes his explanation of the existence of the instinct that constructs hexagonal cells, and turns on the fact that the bees must live over winter.

But let us consider the work of the wasps in the light of this theory. They do not use up honey in making their cells, and they do not live over the winter, so that natural selection has no chance to preserve the best builders through any such means as might be urged in the case of the honey-bee. The wasps perish every fall, excepting a few fertile females that desert the nest and live in some hiding place, as we have before explained, to commence the new colonies the next year; and yet several species of wasps and hornets build six sided cells, like the honey-bee.

There is nothing that aids at all, in the selection theory, even as Mr. Darwin has attempted

to apply it to the honey-bee. Both of the means through which he attempts to show that natural selection acts in saving skilful builders—the saving of honey in making cells of the best pattern, and the necessity of the honey so saved, for winter use—are here wanting; and yet the wasps are as skilful mathematicians as though the existence of the species depended upon an angle of the cell.

The plain truth is, we have bees and wasps building in many different ways. Each method is connected with a peculiar structure and a whole train of instincts."

[For Wagner's American Bee Journal.]

Successful Destruction.

As I have achieved a remarkable success in reducing the number of my swarms from about fifty to two in a single season, I will give as nearly as I can the means by which it was accomplished. In the spring of 1870, I had eight rather weak swarms, which I increased that season to twenty-five, making the last swarm the last of August. Of course they were weak, and were reduced to sixteen by death. With these sixteen I commenced the spring of 1871, determined not to continue making swarms so late that they would not have time to strengthen up for winter. So I stopped multiplying about five weeks earlier than the previous year, making eighteen swarms in July, closing up the 21st. These of course could strengthen upon buckwheat and fall flowers. But the drought dried up the sources, and no honey was obtained after about July 12th. Within about fifty rods of the apiary was an extensive cider mill, where the bees perished in large numbers and where they obtained what is considered by some a fertile source of dysentery, cider.

So I had about fifty swarms, all weak except one which had combs running crosswise, and consequently had no frames taken out. For some reason, I hardly know now whether through stupidity, want of time or carelessness, I did not feed them till quite late. In this condition, weak in bees and stores, with cider and honey unsealed, they were left on their summer stands until December 10th, when after a couple of weeks of very severe weather, thermometer as low as 10 degrees below zero, they were put in the cellar. For fear the treatment already received would not be sufficient to demolish them, the majority of them were left piled up in the cellar without any ventilation. February 11th, I took out five which flew a very little and I put them back again. February 22d was a little warmer and I took them all out finding twenty-three alive. They flew somewhat and I left them out. Soon after a cold storm came on them with snow a foot deep, and by the 1st of April three were left, one with frames running crosswise apparently in good condition, and two very weak, which I have to-day commenced to unite, finding it too slow work to build up.

Now, I think this is a case of successful de-

struction, still if I had to do it over again, I am not sure but I could do better. I think I could kill the other three.

For the benefit of any one who has not had experience, I will give the following points to be kept in view:

Divide your hives constantly to their utmost limit, so as to keep *all* weak, *all the time*, keep them weak in stores as well as bees, and if you feed at all let it be very late in the season.

Let them stay on their summer stands until winter has fairly commenced, then take them in whilst they are frozen and bring them out again in time to have two or three weeks of winter weather.

If you can think of some other stupid thing to do, such as moving them about after they commence to fly, setting honey near the hives to induce robbing, &c., it will be an addition to the above. It will be some help toward fulfilling these conditions, if you have so much else to do that you can seldom see your bees.

C. C. MILLER.

Marengo, Ills.

[For Wagner's American Bee Journal.]

Wintering Bees.

Last fall we fed our bees with sugar-syrup until each hive had about ten pounds supply, and put them in our cellar bee-room December 1st, scarcely doubting that they would take their annual nap and wake up in the spring as usual, but a recent examination disclosed the melancholy fact of eight stocks having starved to death, a greater loss than we have experienced for five years, and, of course, we felt correspondingly gloomy about it, and perhaps we might as well confess not a little mortified, too. Our bees consumed so little honey in the winter of 1870-71, that we felt confident that ten pounds was all they needed, and that the twenty-five pound theory was all right for out-door wintering, but for a repository ventilated like ours it was an unnecessary waste of honey. Well our heterodoxy in this case cost us about \$115, and with all due humility we confess our blunder, and faithfully promise never to knowingly undertake to winter a full stock of bees on less than twenty pounds of stores.

As to the comparative merits of sugar-syrup and honey, we are satisfied that there is little choice between them for indoor wintering, when the syrup is given freely and in season for capping. During the last four years we have wintered several stocks on syrup alone with the best results.

Hereafter we shall adopt the suggestion of Rev. E. L. Brigg, and winter in November 1st, as we are confident it will save honey, prevent mouldy combs and consequent loss of bees. We find much dampness and mould in all of the hives that wintered with frost in them, while those that were dry are now in the best possible condition. In our latitude there are but few days after November 1st warm enough for bees to fly, while the nights are all cold and frosty, causing

a large consumption of honey that ought to be saved for spring (especially where the beekeeper is green enough to winter in on ten pounds), by placing them indoors on or about that date.

Sometime last fall we predicted that beekeepers in this section would experience a greater loss of bees than for twenty-five years past, and judging from reports from all quarters, this prediction has been verified. The year 1871 has been bad enough. Thousands of stocks not only failed to store any surplus, but actually went into winter quarters in a starving condition, consequently bees will be scarce, and those who succeed in getting them through (if Mr. Hazen's overstocking theory is true, which I greatly doubt) may hope for good results. * * *

G. S. SILSBY.

Winterport, Me., March 2, 1872.

[For Wagner's American Bee Journal.]

Eggs in Queen Cells.

As this is a problem not yet satisfactorily solved, I will throw in my mite, gleaned from careful observation. In dividing a colony of bees, I removed the queen and a few frames of brood from the parent stock, leaving it without queens or queen cells, my object being, to have them rear a number of queen cells for queen raising. I put in frames of nice old comb in place of those removed, comb that had not been in colony of bees for months. Some days after in examining the hive I found a number of queen cells sealed over, *one of which was on one of those old combs*. I took particular notice of it, as it struck me as being something singular. That seemed to me clear proof that the bees will transfer eggs from one cell to another for the purpose of queen raising. I think it yet remains to be *clearly proven* that queens will deposit eggs in queen cells and that such eggs will produce good queens. Brethren let us have more light—not the light of theory only—but of demonstrated facts.

J. S. FLODY.

Fayetteville, W. Va.

[For the American Bee Journal.]

Cannot West Virginia have a Convention?

Apiculturists of West Virginia cannot we devise means to meet together and have such a concert of action as to induce the people of our young State to enter into bee-culture with an earnestness that will show to our sister States we have one of the best sections in the United States for bee-culture? It is a source of wealth we hope soon to see developed. Light on the subject is what the people want. Shall we then with one voice say, "Let there be light." We solicit correspondence on the subject.

J. S. FLODY.

Fayetteville, Fayette Co., W. Va.

[For the American Bee Journal.]

Imprudence of Beekeeping.

This may seem an impertinent heading, but I select it as appropriate to my few well-meant remarks. It does seem to me that in some respects the improved beekeepers of the country are among the most imprudent of business men—and women too, if you please. Finding their avocation recreative, healthful, interesting and in a measure profitable, it seems a large majority of them are doing all in their power to make converts and get everybody else into the business. This is too true of the older members of the calling, but more especially so with the younger ones. It is not uncommon for "beginners" (besides parading their much exaggerated "notes" in print to the disgust of experienced beekeepers and to the astonishment of the rest of mankind) to convert a dozen or a score of other new beginners in a single year. What other class of business men would be so much interested in making competition? Now, that a publisher of bee literature should want to increase the number of beekeepers is but natural, legitimate and consistent with his interests. And, too, it may be consistent for men selling patented bees and patented bee hives to do so. But for the honey producer to do so much to increase competition, seems to me the most supreme folly and an unparalleled business blunder. And pray what objects can there be in it? I see but two; one to show the gaping bystander or reader how much the "great bee man" knows; the other to tell folks that "he is making money out of his bees." Nor is this, what I believe to be great mischief, all confined to the thousand and one local small men scattered throughout the country. Men who would be leading lights, and some who *are* leading lights, shine sometimes entirely too brightly. The reports of these big yields and large profits—most of which are outrageously exaggerated—going the rounds of the newspapers, are "waking" multitudes of men "up to the profits of beekeeping." And suppose, fellow beekeepers, that our numbers increase for the next ten or fifteen years as they have in the last two years, where will be our market? Yes, where will we be in the short space of five years? I am familiar with the old idea that extensive production makes ready market, and it may be true, as regards staple articles, but I am satisfied it will not be so with honey, a thing that almost anybody can raise either in the country or in the city.

I concur with some of the sensible writers in the February number of the Journal, that it is quite possible to overstock bee pasturage; but I have much more to fear from the present prospect of overstocking the markets with honey. And if I am correct in my notions, I have done no wrong in suggesting to my brother beekeepers to be a little more prudent.

Chillicothe, Mo.

J. W. GREENE.

A fertile queen and good worker comb is the stock in trade of the apianar.—HULLMAN.

[For the American Bee Journal.]

A few Estimates.

MR. EDITOR:—I was much interested in the remarks of Mr. A. Grimm in your issue of February last. The difference in the comparative number of swarms from the two apiaries, 105 colonies giving but 68 swarms in his southern apiary, and his northern apiary 48 colonies and increased to 86. I think it is generally supposed that bees rarely swarm unless they have plenty of honey in their field. What would be plenty for 48 colonies would be a comparative scarcity for 105, and would account for the smaller number of swarms.

If we suppose 60 lbs. of honey required for breeding and wintering each hive, we must suppose the amount gathered by the new swarms for breeding and wintering the 105 colonies in the southern apiary to be 6300 lbs. Their product in surplus honey was 6800 lbs. The amount of honey gathered by the bees from that field besides what was consumed by the young swarms, was 13,100 lbs.

If we suppose the average of these colonies to be as good as the colonies in the northern apiary, then 73 colonies would have gathered 4380 lbs. for consumption, and yield nearly 8800 lbs. in surplus. Does not this result render it evident that 121 colonies were overstocking the field?

2. The 103 colonies gave but a little over one-half in surplus, the 48 colonies gave two-thirds. I think it probable that 68 colonies would have given more surplus than 73 colonies.

Is due attention given to this part of our honey business? No doubt that when the honey is taken from the flowers, more is secreted, but it is not secreted probably in a constant stream so that bees may find a full supply from one flower, and another as soon as the first is sated, and then another. Instead of this we find, when a bee has visited a flower, a second on trial will leave it at once. Sometimes a dozen white clover heads will be visited before one is found unvisited of its sweets. I have counted one bee visiting up to hundreds before a load was secured for the hive.

Albany, N. Y.

JASPER HAZEN.

[For the American Bee Journal.]

Transferring Bees.

MR. EDITOR:—In the January number of the American Bee Journal, Mr. J. W. Cramer wishes to know the best plan to work on when transferring a swarm from an old box hive to a movable comb.

I will give my plan. It appears he has trouble in getting the bees out of the old hive. His plan is a troublesome one, at the same time there is danger of losing the queen and a great many young bees.

I use a box, called a forring box, which I will describe as follows. I make the box 16 by 16 inches at the bottom, 16 in. deep. and 8 by 8 in. at the top, making saw cuts in the top to give

ventilation. Spring in some cross sticks for the bees to cluster upon. When I get all things ready, I go to the hive I wish to drive out, and puff in a little smoke from cotton rags, which starts them to eating honey. I give them a little time to fill themselves, at the same time let as many of the bees, as were out at work, in as possible before moving the hive. I then carry it off to some suitable place, invert it on the ground, and put on the forring box, tie a table cloth around the hive and box.

I hold up one edge of the box, to tap on the hive to start them up; in fifteen minutes you have all the bees up with the queen, clustered in the box. When you have all the bees out, untie the cloth, spread it on the ground, take off the box that contains the bees set in the cloth, bring up the corners together, tie them fast, and carry them back to the old stand for the bees to cluster on that were out when the hive was moved off; prop up one side to prevent smothering the bees; keep the hive in the shade.

Now you have all the bees out of the way, you can transfer the combs without having the bees crawling over the combs daubing themselves with honey.

Sometimes we have to transfer in the cellar, in order to get out of the way of rubbers, if we should undertake this with all the bees in the hive, I think it would be a difficult matter. When I get the bees out and secured, I split the hive open, out out the combs carefully, place them on a table, cut them to fit the frames, tie them in the frame with cotton twine; set them in the new hive as fast as filled. When we get all the combs in, we move the box off, set the hive on the old stand. untie the cloth, draw one edge under the hive, spread it out smooth, shake off the bees, and let them crawl in, just as you would a natural swarm.

I have transferred hundreds of swarms; over a hundred last season in this way, and never met with any trouble. I have transferred from April to September without any trouble.

Monroe, Iowa.

J. W. SEAY.

[For the American Bee Journal.]

Beekkeepers of Central Illinois.

A special meeting of the Beekkeepers' Association, of Central Illinois, was held at Hudson, McLean county, May 24th, 1872.

MORNING SESSION

called to order by Vice President J. V. Brooks, of Lexington.

The minutes of the last meeting were read and approved.

On motion, Messrs. J. L. Wolcott, Charles McGraw and A. Ogsbury were appointed a committee to prepare subjects for discussion. While the committee were absent the following questions were answered:

1st. How to get rid of fertile workers.

2d. How to successfully introduce a queen.

J. V. Brooks replied as follows: To get rid of fertile workers, take two frames containing

brood, with the adhering bees, place them in the center of the hive containing the fertile workers.

To introduce a queen with success, put the queen with a few of her own workers, into a small wire cage, having the opening at one end stopped with wax; suspend the cage in the center of the hive; if the bees fail to release the queen within forty-eight hours, assist her by reducing the quantity of wax at the end of the cage.

Upon invitation, a number of those present signed the constitution and became members of the Association.

The committee on subjects then presented the following subjects for discussion :

- 1st. Hives and summer management of bees.
- 2d. Are Italians preferable to black bees?
- 3d. Are honey extractors beneficial?
- 4th. The best mode of uniting bees.

Mr. Brooks then opened the discussion on hives by recommending the movable comb hive, as the only hive that should be used, the preference being given to the hive in which the bees could be handled with the greatest ease and profit.

Mr. McGrew agreed with Mr. Brooks on the movable comb hive, even though the bees should build their combs crosswise in the frames. Combs should be changed once in two or three years. He then exhibited a model of his hive, and spoke at length on its merits.

Mr. Benton, of Michigan, said the larger the colony, the more profitable will they be; they need protection as well as cattle, &c. He has a hive claimed to be proof against moth and insects, from the fact that it is used suspended by a bail or handle to the limb of a tree or other suitable place, with open bottom.

E. A. Gastman, of Decatur, did not believe that the moth does the bee any injury, as when the moth is formed the damage is done; it is the caterpillar that does the harm.

Mr. Benton said the moth would eat through the combs and spin their webs and thus injure the combs and bee.

J. V. Brooks said the moth works not among the old bees and honey, but among the brood and young bees, thus working destruction to the colony. Strong colonies are safe against the ravages of the moth. Bees should be handled only when necessary and when the temperature of the air is warm. If some colonies have more stores than needed, divide with the needy ones, or feed them with sugar syrup. Take off boxes as soon as the bees cease working in them, thus preventing the soiling of the comb. Put on boxes as soon as the honey season commences.

Dr. J. Johnson, of Hudson, thinks there is a difference of opinion with reference to the moth attacking the bee and the bee attacking the moth.

Mr. Wolcott said that bees will attack the moth; also recommended salt for the destruction of ants, and that bees have a supply of water.

Mr. Gastman has seen the bee attack the moth and carry it off from the hive.

Mr. Ogsbury said bees will cut out comb containing moth; also attack the moth worm.

J. W. Gladding, of Normal, was asked to explain the merits of his round honey-box, but not having a model, distributed his circulars among those present.

Adjourned to meet at two o'clock.

AFTERNOON SESSION.

2d. Topic.—*Are Italians preferable to common bees?*

Mr. Gastman thinks them better; they gather honey when the black bees will not, and are more prolific.

Mr. Ogsbury's experience is that the Italians are far superior to the black bees.

Mr. Brooks said that some years the Italians will work on the second crop of red clover.

Dr. Johnson said his theory was that the Italian bee would eventually run out.

Mr. Brooks' views were far different from that of the doctor. He thought the old-fashioned bee would have to get the stripes upon his back or leave the country.

3d Topic.—*Are honey-extractors beneficial?*

Mr. Wolcott would not be without them; they are beneficial.

Mr. Sawyer—The honey extractor needs no defence; it speaks for itself in the saving of comb and honey, and is of great advantage to beekeepers.

The Atkinson & Barber extractor was exhibited by Mr. Wolcott, of Bloomington. The Peabody extractor by Mr. Sawyer, of Normal.

Mr. Brooks has used the honey-extractor with entire satisfaction, yielding him a profit of at least 100 per cent. in honey, and nearly all the combs, which is a great economy, as it takes about twenty pounds of honey to make one pound of wax.

4th Topic.—*The best manner of wintering bees.*

Mr. Wolcott commenced the winter with one hundred and forty-five colonies; kept the most of them upon their summer stands; lost but three colonies; would recommend wintering upon the summer stands, with proper protection.

E. A. Gastman at the beginning of winter had thirty-eight colonies; has now not to exceed ten colonies, but less in proportion among those wintered on their summer stands.

J. V. Brooks reports a loss of seven out of forty colonies wintered in a bee-house; disease, in part, dysentery; is at a loss to explain the cause of the great loss among bees this winter; found sour honey in the capped cells.

Mr. Sawyer, of Normal, reports a loss of about fifty out of about seventy colonies; cannot tell the cause.

A number of others made reports of about the same average loss.

5th Topic.—*General remarks on bee-culture.*

It is necessary to put bees in the spring on the same stand they occupied the previous year. No danger in moving bees one-half mile or more, this season of the year. Artificial better than natural swarms in some cases. Strong colonies needed for surplus honey. Cleanse old, unclean combs by exposing them to the fumes of burning sulphur.

The following resolution was then adopted :

Resolved, That this association return their thanks to all the papers which have published the notice of this meeting. Also to the citizens of Hudson for their kindness and hospitality, and giving the use of their school house for the use of this association.

On motion the Convention adjourned to meet at Lexington, McLean county, on the 18th of July, at 9 A. M. Ladies are particularly invited to attend.

J. ANSLEY, *Secretary*.

J. W. GLADDING, *Corresponding Sec'y*.

[For the American Bee Journal.]

Gallup on One-story Hives.

The May number of the Journal is just at hand. We are certainly sorry that we cannot make Novice understand us, but we have surely failed thus far. No, Novice, we are going to try another plan, and see whether you cannot get our idea into your head, and in the meantime send twenty-five cents to D. L. Adair, for Progressive Bee Culture, and that will probably help you a trifle, as Mr. Adair and Gallup have arrived at nearly the same conclusion with our new ideas.

When the flush of honey comes on is the time that the queen would breed the most, if properly managed. But as they are usually managed, the honey gatherers encroach up the brooding space, and instead of giving the queen more room at the time she requires it, she is restricted in her breeding. This is the reverse of what it should be. Now scratch your head and try to take in our idea. We don't care a straw what kind of a hive you use. Now we want a large amount of bottom combs; therefore we do not want a two-story hive, for the queen prefers to keep her brood (we are going to use Mr. Adair's language, as it is most appropriate) at the bottom of the combs in midsummer, and contrary to our previous notions we find that the more prolific the queen the more brood there is raised; the better the balance of the stock is kept up, the more the workers are stimulated to action. *Understand us*. If brood hatching is not kept up rapidly and abundantly, there is soon a disorganization of the forces in the hive. It is the age of the bee that determines the occupation. Now take an ordinary ten-frame Langstroth, such as you use; get the queen to breed in all parts as much as possible, until you have what you call a rousing stock; now have a Langstroth made double-width, to hold twenty frames, all on the ground floor. Place your stock and comb in the centre; now you have room for five combs on each side. Fill up with good, nice, straight-worker combs. We will suppose the queens want more room; move the brood apart and insert one empty comb right in the centre, and keep doing so at regular intervals as required, and in the meantime (by means of the extractor) keep the honey out of the way in the outside combs, and see if you

cannot get up a larger and stronger stock of bees than you ever had before, providing the honey harvest is good at the time.

It is the new idea that we wish to beat into your noddle, and not *the style of hives*. With this management, or this idea, we can get up a stock of bees that will gather honey rapidly all summer, providing the forage holds out abundantly. By this idea, properly carried out, we check all disposition to swarm, and keep the queen breeding up to her full capacity. As bees are usually managed, if we get up an extra strong stock right in the midst of the honey harvest, the disposition to swarm decreases the production of honey to a great extent. Now, if we can get up stocks as strong as we usually did, and prevent all disposition to swarm, we have gained two important points toward an extra large yield of honey.

Old Mr. Hazen has been laughed at considerably, but I think the old gentleman has some very good ideas, if properly carried out, as well as some that are not so good. Mr. Hosmer, Adair, Grimm, Butler (of Jackson, Mich.), Langstroth, Gallup, and we don't know how many more, have come to the above conclusion. That is, strong stocks for strong surplus honey. Yet we don't know that all of them have our ideas about raising the bees, and keeping them to work right when they are raised, and that, too, in such extra strong numbers as Mr. Adair, Hosmer and Gallup do. We see Mr. Furman is considerably excited, but we guess he will live through it. He will probably feel better after blowing off steam a little. Keep as cool as you can, friend Furman, it will be better for your health. We firmly and sincerely believe that the man is now living that will get one thousand pounds of honey from a single colony in one season, and if from *one why not from more*. Now, friend Furman, your calling him a liar will not alter the fact one particle.

E. GALLUP.
Orchard, Iowa, May, 1872.

[For the American Bee Journal.]

Answers to "Enquirer."

In the May number, page 252, Enquirer asks why it is necessary to keep until after sunset swarms that are to be doubled or to be returned?

Answer.—It cannot be done in the daytime without great risk of quarreling. We have several times, and lost the entire swarm; but after sunset they unite in peace; therefore we leave all such swarms, and leave them just where they were until we unite them.

As we stated in the February number, the basket hiver is simply a common peach basket, with the bottom bored full of holes, and the slats that form the sides about half cut away, to make it as open as possible. Now stick in the inside a goodly number of strips of comb, about an inch wide and two or three inches long, all over the inside, for the bees to cluster on. Nail a leather strap on the outside of the bottom, seven inches long, with a harness snap sewed to the end of

it. You then want two or three different lengths of poles, with a ring on each one, to fasten the snap to. As soon as the swarm begins to light, let about half of them cluster; now jar the tree with the butt end of the pole to make them take wing; again put the basket in the spot where the bees begin to cluster, and they will enter the basket. Then carry them to where you wish to hive them.

J. BUTLER.

Jackson, Mich., May 14, 1872.

[For the American Bee Journal.]

Inquiries.

Will it be safe to use for new swarms honey from hives in which bees have died from dysentery?

I have lost more than half of mine by this disease in movable comb hives, and if I can use them again I will be able to save something. Your correspondent, who thinks that bees died of dysentery caused by honey dew from the beech, fails here, for there is not a beech within one hundred miles; and I think that beekeepers have lost fully fifty per cent. of their colonies, and certainly not from that cause. It has made no difference whether they have been in-doors or out; the only exception to this is the case of one man, who gave his bees a chance to fly in February. He did not lose a swarm.

S. P. BALLARD.

Sharon, Wis.

Bees have wintered very poorly in these parts. About one-third or a half died during the winter, and many swarms have left their hives. I am not surprised that the bees left such things. Out of one small hive ten pieces of timber crossed in all directions, so the bees had to brood on timber, some of them as thick and broad as two fingers. Hardly four inches of straight comb could be found in the whole hive. Such a place might do for chickens to roost in, but it is a very poor place for bees to breed in. Another hive I looked at was about eight inches wide, ten deep and fifteen long, with a partition across the hive which confined the queen to one end, and the other end was all drone comb. They had tried it one summer, and were satisfied it was best for them to leave such a thing.

I find that bees feed better on fine ground Indian meal, mixed with bran, than they do in either rye flour or the cleanings from the smut mill. I had three boxes containing the three different articles, and they preferred the corn meal and bran.

I gave one of my hives last September some Italian eggs to raise a queen. When I opened the hive this spring I found a large number of drones, but they have now all disappeared, and a fine specimen of workers appear. It is one of the strongest hives I have. I intend trying W. R. King's fertilizing tent this season. I may report the result.

J. LUCCOCK.

[For Wagner's American Bee Journal.]

Natural, Hardy and Prolific Queens.

ANSWER TO MR. JOHN M. PRICE.

A renowned French lawyer has written somewhere: "Give me ten lines of the writing of an honest man, and I will send him to the gallows." Of course, to obtain such a result, it was necessary to be able to give the words contained in these ten lines another meaning than that intended by their author.

Mr. Price, in his last article, in the June No. of the American Bee Journal, has gone further with me, for not only by the interverting of the extracts does he change the meaning of my letters, but he has falsified them also. For instance: I have written, "I am very little disposed to *sell* you any more queens," and he copies to *let you* (have) any more queens. As I have already stated in the March number of the American Bee Journal, the same John M. Price, in a letter dated July, 1870, asking for another queen, writes: "If you can send the queen let me know *with price*." Mr. Wagner has that letter in his hands. I have sent it to him with another of Mr. Price's letters.

In the July, 1870, letter, I answered that I knew the queen I had sent was prolific, and that Mr. Price had ill judged her, and, that with spring, she would prove very prolific, &c. Two months after, I received another letter, dated October 12th, 1870, in which I read: "Please send me a queen that you know from experience to be good, pure and prolific, either Italian or of your own raising. *C. O. D.* (collect on delivery), send Monday or Tuesday. Signed, J. M. Price."

I answered that I had no queens to spare; and that as soon as the bees could raise queens in the spring, I would send him one, but at the same time I gave him the advice to get one or two imported queens. This queen or queens were of course to be sent according to Mr. Price's own terms, *i. e.*, *C. O. D.*

I beg the reader to remark that the second paragraph of my answer which refers to the imported queens is put purposely without date, and, coming after my letter of April 21st, 1871, while the whole was written about October, 1870. Meanwhile the discussion between us on the artificial queens continued and the laugh being on my side, as we say in France, Mr. Price lost his temper, and, finding no good reason to combat mine, he concluded to attack my honesty.

To put an end to the personal dispute, for which I beg leave to offer my excuse to the readers of the Bee Journal, I offer to Mr. Price, that, we both should send all the letters in our possession to Messrs. Langstroth, or Gallup, or Novice (A. I. Root), or Nesbit, or Quinby. All these gentlemen are well known for their honesty and impartiality. If the gentleman chosen by Mr. Price, among those named, judges that I engage myself to replace the queens in question, then I promise to send ten tested queens to Mr. Price. I will add this condition: The verdict shall be inserted in the three Bee

Journals published in this country at the cost of the loser.

Mr. Price has said to a well known beekeeper, whom I can cite, that he was anxious to get himself a name in the bee-keeping fraternity. I hope he will seize this opportunity of seeing his name in the three papers with pleasure.

CHAS. DADANT.

[For the American Bee Journal.]

Bee Notes from Alleghany County, Md.

MR. EDITOR:—If you will permit me I will give you a few notes on bees in Cumberland and the surrounding country:

Bee-keeping is in a backward state in this section, that is improved bee-keeping. Some have sold all their bees because they have moved to town, but that is no excuse, for I live a quarter of a mile within the city limits, and my bees work just as well as they would if they were in the country. There is no better field for bees than Alleghany County. The first honey we get here is from locust, which blooms about the middle of May and lasts about a week, and is crowded with bees from morning till night. Next is white clover, and then mustard, which I think is just about as good a honey producing plant as can be found anywhere. It blooms during the whole summer, wet or dry, and is visited by swarms of bees during the whole day. Indeed, I believe the bees prefer it to white clover. The honey is rather red, but clear, and I can get more honey from it than any other plant. Linden blooms here about the first of July and lasts about four days. I believe it produces the best honey, but it does not last long enough. Before the bees have time to gather much of it it is all gone. If it would last as long as mustard or white clover, it would exceed both in amount of honey. While linden is in bloom there are not many bees to be seen on other plants. There is quite a grove near this place along the Potomac on the Virginia side, and some are planted along the streets of the city for shade trees, and so there is an over supply of honey for the number of bees kept here.

As I told you before, I lost seven stocks last winter, and I saw in the last number of the Journal, a remedy for the disease they died with, namely: to extract all the thin honey that is not capped over, and if there is anything in it, I will try it. I think I will purchase a honey extractor, for I have some trouble to get the bees to work in boxes. I do not know whether my bees died with a disease produced by this thin honey or not, but I noticed that those stocks that died, had some of it. I left the strongest stocks out on their summer stands and they came through strong and healthy, but those I put in a nice warm house are the very ones that died. Did not these I left out gather as much of this honey as those I put away, and, if so, why did not it kill them, also? Can any one answer that question? I believe that it is a proof that bees will winter better on their summer stands

(protected from cold winds) than they will when put away, for I never until the last winter, put my bees away and I very seldom lost any. I do not want beekeepers to leave their bees out because I did, for others might succeed just where I failed. I am going to try artificial swarming this season, but have met with some reverses already; first, I cannot get many queen cells capped over, and those I do get, after the queens hatch, are lost when they fly out.

To-day the bees left all the nuclei I had and joined in one swarm. I put them into a hive, and as I thought it had come from one of the hives, as a young swarm, I put it upon the stand. But after I went to look at my nuclei I found all the bees gone, and then I knew where the swarm came from. They had killed all the queens, but one, by that time, and therefore, I have got only one queen to commence swarming with. What puzzled me most was why the bees left the nuclei and joined into one swarm.

C. E. WIDENER.

Cumberland, Md., May 24th, 1873.

[For the American Bee Journal.]

Wintering Small Colonies.

I read an article from Mr. Hosman, saying he divides his strong colonies making three or four out of one, not using over a quart of bees, if he has more he would shake them off on the snow. I think this is calculated to lead new beginners out of the right channel, for that suits most new beginners, for increase is their aim; here is where so many new beginners have failed. When movable comb frames came in use, they thought they could increase their colonies, whether they would or not; they weakened them, however, so much as to give a foothold for the moth which destroyed their bees, then the patent hive got thunder. My plan has always been to keep my bees strong; they winter better, and come out strong early next season. Mr. Hosman may be right, but it seems to me he is trying to take a near cut.

I don't intend to criticise him, I just want to caution new beginners to go slow, to keep their colonies strong both winter and summer, that is my experience. I have tried wintering small colonies when I had queens in the fall that I wanted to keep over, but generally lost them. I will close by saying, keep your bees strong. Aim at a moderate increase, and you will find your increase more rapid, than by striving to do too much.

Monroe, Iowa.

J. W. SEAY.

Mead.

Will some one of the many readers of the Journal, give a recipe for making this agreeable summer beverage.

GEO. HOWE, M. D.

Pie a la Hache.

Parish Plaquemine, Louisiana.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—Apple trees have blossomed and gone, and for two or three days gave us considerable honey. Locust trees have also been loaded with blossoms, and although the weather has been very favorable, no honey, or none of any account, was collected; of course the bees worked on them, and many hearing their joyous hum and seeing the great numbers at work, said, accordingly, they were doing finely, but a careful scrutiny of the interior of the hives showed, as it often does, that the bees were doing all they could, but each day's labor hardly produced enough to feed the countless thousands of "little ones."

Abundant rains brought white clover in abundance, but even that failed to give the accustomed results until yesterday and to-day, June 12th and 13th.

We had really begun to think that we were at last to have a sample of Gallup's poor season two years ago (by the way, will some one tell me what Mr. Hosmer did that season, as he seems from his offers to defy alike bad seasons and good), but at the rate honey is coming now, we fear we shall have no such opportunity for experiments.

To go back to the locust trees, we remember only one good season for them, 1870, when we got about 1000 pounds locust honey, and since then we have had two of which locust trees would hardly bear classing with honey-yielding plants.

It has been many times suggested that we plant a locust forest instead of basswood, but basswood we have proved and tested, and we think it never fails entirely, and on the whole produces more honey than all other sources together.

Our young forest is now under the influence of cultivation and bone dust, just shaking their bright leaves in the breeze as if they would say, "what fun it is for us to grow!"

Our queen or queen worker mentioned last month laid about 6 inches square of brood, considerable of which was drone, and then tapered off and slid away somewhere, leaving her small family to do the best they could, and so saved us the trouble of pinching her out of the world, to make room for some one who would preside with a greater capacity for replenishing the empty cells provided for her.

There certainly would have been no difficulty in deciding, as Mr. Langstroth says in his excellent article, page 267, that such a queen as she appeared when first hatched would probably be quite inferior.

In fact, our yield of honey has been furnished a greater part of it from comparatively few hives, and a few also furnish but very little; and we think the greatest reason is the difference in the capacity of the queens; but the fact stands out very plain and prominent, that our *very best* are just as often raised in small stocks or with but few combs or bees, and our artificial queens are certainly the best. One reason may be that they

are always reared from our choicest queens, and natural queens are raised as they happen.

We keep our queens generously until their third year, and some until the fourth, when very prolific.

We are very sorry to see such hard words pass between Mr. Price and Mr. Dadant, and feel sure that both gentlemen are much better men than they would persuade us. In the heat of argument, both are speaking stronger than they mean. Voluntary mistakes, we think, will apply to Mr. Price as well as Mr. Dadant. See p. 78, vol. 6, also.

Mr. Price has been referred to before, and must have known that Novice makes an apparent contradiction, and to be honest, why does he not mention that such is the case? The last statement was made carelessly while we were writing with another topic in view. Nearly all of our Grimm queens were used to replace queens whose progeny were too near black, some quite young and prolific, so much so that we have since regretted replacing them.

And Mr. Dadant, if you would allow us to advise, we should ask him to send Mr. Price a queen to be paid for only when and at what price he will think fair and just. Mr. Price will do what is right and just, we *know he will*. There is quarrelling enough outside; please let us have no more in "our family," be it ever so large.

Mr. Gallup comes down honestly and says he thinks the same result might be obtained with regular Langstroth frames, and promises directions for using his principle with the Langstroth frame. We really believe his "hitting us" has something the same effect as the parent who punishes only to "make the child better." If we don't "get better," we certainly get some new ideas, and they don't hurt at all. Many thanks, Mr. Gallup!

The best colony in all our apiary, we believe, is in a two-story hive, frames one foot square (not the Gallup hive), and they are really pretty to handle, just the thing for ladies to handle, but for some other reasons we prefer the shallow frame.

The queen of the colony just mentioned is two years old, and was raised from four combs of brood only, *no bees at all*. The combs were put in an empty hive over night, and next day, very warm weather, so many young bees had hatched out, that we let them go, and they alone raised a queen, and that queen, now just about two years old, we pronounce the *must prole* in our apiary. "How is that for high," or rather for Price? We have raised queens the same way before, but it didn't always work. We dislike the bother of cutting out queen cells. Can't some other "Yankee" assist us in devising some arrangement for keeping queens in their cells twelve or twenty-four hours after they are hatched, so that we may save them all. Our device of late years answers, if sufficient care is used, but they are too cumbersome and clumsy.

After they are hatched, we do this way: Take a comb or two of brood from any hive, and the young queen and a few young bees from her own hive, and all introducing is done. When she lays, give them three or four more frames

of brood, and you have a nice colony with little trouble.

Do you wish to know what fun we are going to have to-morrow? Well, listen. We are going to hoe up the few remaining weeds, and level the ground around the hives; put some fresh saw dust about the stands; see how much the new soft white combs have grown over night; look if the thin lazy little chaps have commenced work in our fine English glass shades (that ain't quite box-honey, is it?). Scold thbse 'queens that don't get around and fill all empty cells with eggs; scatter ashes over the floor, get our better half's dust pan, brush-broom, tack-hammer, sharp knife; get our pants stuck up with bees-wax on the knees (don't hurt 'em), and get tired out as we are now, and so good-night to all!

NOVICE.

[For the American Bee Journal.]

Bee-keeping in Central Illinois.

It has been many years since I commenced keeping bees. I came to this State from old Kentucky in 1835. I was then a young man of very limited education and have not learned much since. At that time I turned my attention to bee-keeping, and I succeeded finely for a number of years. I used the common box-hive; never went to look at them, only when they swarmed or when I wanted honey, but when I now look back to that time I can easily see why I succeeded so well with my careless management. At that time a greater part of our beautiful Illinois prairies were as nature adorned them, abounding in flowers of all kinds; bees then found more material than was possible for them to work up. When I used to ride over the prairies and see thousands of acres, the flowers of which were not enlivened by the hum of a single bee, little did I think of ever seeing a scarcity of honey; then was the time for honey, and through its over-abundance strong stocks were built up, which rendered them able to expel the moth, and defend their domicile. But, alas! some fifteen years later all of the beautiful flower gardens had been changed into fields of corn and wheat, and the poor beeman's servant was compelled to hunt its goods from other sources, and the result was, the swarms were reduced in strength through the scarcity of honey. Mr. Moth hatched out in their midst and fully developed himself, and took possession of their scanty stores, and the bees died. when fall came on the farmer went out to get his honey, as he had done for years previous: he found a sad state of affairs, hive, comb and rooms were all burned, he declaring that he had no more luck with bees, and would quit it altogether. I with the rest suffered more or less from the disadvantages under which my bees had to labor, and under which I labored in handling them, for then I had nothing more in the way of a hive than a box made of rough boards with a few cross-sticks in it. To-day we have the Langstroth movable frame hive, which I have

used many years, and, the longer I use it the better I like it. I think it affords the greatest convenience in handling, examining and protecting your bees against any obstacle which nature may bring in their way. During the past six months this section of the country has been canvassed by five or six agents of patent hives, some almost identical with those in use. These agents all being oily tougued fellows succeeded in selling a great many hives to uninformed men for the small sum of \$10. If I should ask them that much for a hive full of bees they would think that an outrageous price. During the last four months these agents have been seeking to create a bee-fever. Everybody wants to keep bees, and wants to have them in some fancy hive, furnished with doors and sliding drawers, and in fact everything in the world that would make it appear complicated.

As I am in the book trade, I thought to myself now is the time to sell bee-books, so when I saw a man suffering from that terrible fever I recommended either Quinby or Langstroth's excellent work on bee-keeping, but, so far have not succeeded in selling a single one. The other day an old gentleman who kept bees in his yard for many years remarked to me that he had been expecting his bees to swarm for the last month. I asked him if they had built queen cells. He replied, that he didn't know about that, but had noticed all his life that the king bee couldn't stand much heat, and that during the warm days of spring with the old bees would lie out in clusters on the outside of the hives, which was in every case a sure sign of swarming in at longest four days. He said when they swarmed the king and the old bees left, and the queen and the young bees remained behind. When I heard him go on in this matter, I hesitated what to do under the circumstances, finally I advised him to read Quinby. He replied he would rather become acquainted with the way and nature of the bee through experience, than through bee books and journals. Well, on the 16th day of May (very early indeed for swarms to issue), he had a chance to learn experience, for sure enough, as he would have it, his king bee came out with a large swarm and settled in the branch of a tree some nine feet from the ground. He placed one of his new patent hives under the tree, got two of his sons who are young men to help him, advising them all the time to keep a sharp lookout for the king, for he never had seen one, he got on a chair, bent the limb down so that the boys could hold it, he then shook the bees off into a large basket and was handing them down to the boys when the chair tipped, he slipped, the basket turned, the bees fell out on the boys and the beekeeper fell down in their midst, and as none of them were provided with a bee-hat and gloves you can imagine what a sweet time they had. I think each received about hundred stings. It has been four d ys since it happened and they are still fearfully swollen. I have laughed myself fat over it, and hope that my readers may enjoy it equally well.

I also hope that it may serve as a good lesson to two classes of beekeepers, viz., young begiu-

ners and old ones uninformed and unwilling to be informed.

The wise man delights nature's ways to explore,
The fool is satisfied, because he knows no more;

Men who want to succeed in bee keeping at the present day, must avail themselves of the opportunities which our bee journals, bee books and well informed bee men give to the public, to educate themselves in this science of management and culture, then and not until then can they expect success.

OLD GRANDFATHER.

Marine, Madison County, Ills., May 20, 1872.

[Translated for the American Bee Journal.]

Honey dew on the leaves of a Linden.

On the 21st of July, 1869, at Liebfrauenberg, France, the leaves of a linden were covered on their upper surface with a viscous and very sugared matter. The tree had contracted the honey dew disease; a kind of manna frequently observed not only on lindens, but also on many other trees. I have seen it on a plum tree, and what is more rare in France, on an oak tree.

On the morning of the 22d, the honey dew was so abundant, as to fall in large drops on the ground. It was a rain of manna. At 3 o'clock in the afternoon, the dew dropped no more from those leaves exposed to the sun. It was so thick that one could touch it without soiling his fingers. It formed a kind of transparent and flexible varnish. As soon as the leaves were in the shade, the dew returned to the liquid state. At 9 in the evening of July 23d, the leaves on the extremity of the branches, were carefully washed and sponged to remove all sugared matter. At six in the morning of the 24th, the leaves that had been washed the evening before, seemed to be free from dew; yet with a magnifying glass one could perceive some glittering points formed of very little drops. At seven in the evening, the leaves were in the same state. The day had been warm, the thermometer indicating 29° (83° Fahrenheit). On the 25th, many drops of honey were spread over the leaves, but none upon the main nerves of the leaves. At three in the afternoon, the thermometer indicated 30°.

In the night of the 26th, the leaves were washed by a heavy rain. It was impossible to watch the progress of secretion on the leaves. A swarm of bees settled on the tree. On the 28th, in the morning, the leaves were covered with spots of dew, that had appeared during the night. On the 29th, the dew increased. On some leaves it occupied one-third of the surface. At 2 P. M., the thermometer indicated 20°. On the 30th, the dew was very abundant. This linden remained covered with it until the beginning of September, when it was stopped by long and persistent rains.

On the 22d of July and the first of August, the dew was gathered by washing the leaves. The product treated by the *sub-acetate* of lead to eliminate the albumen, the mucilage, &c.,

&c., gave a syrup in which some sugared crystals were found.

This honey dew was found to contain sugar similar to that of sugar cane. After some yeast was added, the sugar disappeared completely, yet in the fermented liquor some *dextrine* was found.

The analysis of the substance gave:

	Gathered July 22d,	August 1st.
Cane sugar . . .	48.86. . .	55.44.
Fruit sugar . . .	23.59. . .	24.75.
Dextrine . . .	22.55. . .	19.81.
	100.	100.

The reader will notice, that the proportions of the ingredients were not the same in the honey dews gathered at different times. Doubtless nobody could expect to find exactly the same proportions at different times. What is most remarkable, is the striking analogy of the proportions of the ingredients of the honey dew of the linden and those of the manna of Mount Sinai, which is composed as follows:

Cane sugar . . .	55.
Fruit sugar . . .	25.
Dextrine . . .	20.
	100.

By comparing the dew spread on the sickly leaves of linden with the sugar contained in healthy leaves we find:

	Cane sugar.	Fruit sugar.	Dextrine.
In one square meter of healthy leaves . . .	3 gr. 57.	0 gr. 86.	
In dew gathered on meter of sickly leaves . . .	13. 92.	7. 20.	5. 62.
Difference . . .	10. 35.	6. 37.	5. 62.

The honey dew exuded by the sick leaves of linden is therefore considerable, and furthermore, dextrine, which is found in those leaves, does not exist in a healthy leaf.

From the measures taken upon a tree of the same age and size, it results that the leaves could cover a surface of 120 square meters. On the 22d of July, the tree was supporting 2 and 3 kilogrammes of dew (4 to 6 lbs.).

In the normal condition of vegetation, the sugar elaborated by the leaves under the influence of light and warmth, penetrates into the organism of the plant with the descending sap. In the abnormal state which determines the formation of the dew, the sugar matter is accumulated on the upper surface of the leaves, either because it is produced in larger quantities, or because the motion of the sap is interrupted by the viscosity resulting from the appearance of dextrine.

The honey dew cannot be caused by the meteorological influences of warm summers. It is true that this linden secreted dew during a period of drouth in a hot summer, but it should be remembered that only one tree was attacked by this disease, and that only a few rods further, there were some lindens quite healthy.

Some authors pretend that plant lice after having sucked the dew from the *parenchyme* of the leaves, spread it afterwards, scarcely modi-

Red, but this is contrary to the results of analyses. Besides some persons have said that some insects can provoke the production of honey dew.

Messrs. Ehrenberg & Hemprich attribute the formation of manna in the mountains of Sinai, to the bite of the *coccus* on the leaves of the tree *Tamarix mannifera*. They say: "The manna falls on the earth from the regions of the air, is from the top of the trees and not from the sky. The Arabs call it *man*. The aborigines and the Greek monks gather it to eat on the bread like honey. I have seen it fall from the tree, I have gathered it and brought some to Berlin with the plant and the insect."

The manna gathered in 1869 at Liebfrauenberg, did not originate from an insect like that of Mount Sinai, although it was composed of the same substances. When it was first noticed on the linden, no insects were to be seen. After a day or so, lice were perceived glued on a few of the leaves. I have seen the above, after having washed the extremity of some of the branches. Some diminutive drops of dew were discovered increasing constantly until the leaves were entirely covered with it.

This slow and progressive extension of the honey dew was evidently accomplished without the help of lice, which like bees and other insects, arrived only afterward to suck the sugared food.

Translated from the Bulletin des séances de la société centrale d'Agriculture de France, by CH. DADANT.

The above article explains the immense yield of honey gathered by Messrs. Gallup and Hoemer. When such dews happen, the bees are never numerous enough to gather all. Oak trees in my neighborhood give some honey occasionally. It happens generally when the atmosphere has been cooled after a thunder storm. I have seen that very often every season; it is scarcely ever very abundant, but helps the bees to a certain extent.

CH. D.

[For Wagner's American Bee Journal.]

The Berlepsch Declaration.

We call special attention to the Baron of Berlepsch's reply, published by Mr. King, to our friendly strictures upon his "Declaration."

Those who desire to examine the matters in controversy, have now all the facts before them, and need no special comments from us to influence their opinions.

We accept the baron's explanation that he no longer holds us responsible for what he once supposed to be our arrogant and ridiculous assumptions, or for attempting to claim his invention as our own. We have, from our own experience, too much sympathy for his loss of health, to seek to involve him in any unnecessary controversies.

L. L. LANGSTROTH.

REPLY OF BARON VON BERLEPSCH TO MR. LANGSTROTH'S STRICTURES ON HIS DECLARATION.

Translated from the German for the "Beekeeper's Journal," BY CHARLES L. COHN.

I do not understand the English language, and consequently was obliged to have Mr. Langstroth's article translated into German, and of course am compelled to give my answer in German also, but cannot be held responsible for its correct English translation.

Mr. Langstroth's accusations are, that my letters to the *Bienenzeitung* contradict the statements of my declaration in the case of Otis vs. King.

The first contradiction Mr. L. professes to find is, that in my second letter to Mr. Dzierzon, I said I had exposed myself to well deserved ridicule, because I had condemned a hive the construction of which I did not understand, while in my declaration I said that I had already in 1843, recognized the importance of the invention, and sought to improve it by substituting frames for bars.

In the spring of 1843, I got of John Baptist Furst, in Frensdorf, Bavaria, a so-called Dzierzon hive, but I found afterwards that it was falsely constructed, because the bars ran from front to rear, instead of from right to left. I remedied this evil, but condemned the "Dzierzon hive," because I took it for granted that the bars in all of them were like this one. But on a visit to him afterwards, I found that his bars were properly arranged, and that "I had made myself ridiculous" by slandering his hives in general. When, in my declaration, I asserted that I appreciated the importance of his invention, I was alluding, as a matter of course, only to the movable feature of the hive.

In consequence of the false position of the small frames of the above-mentioned Dzierzon hive, it was impossible to place them in firmly, and after I discovered the correct idea of ranging them from right to left, I had only to remedy the defect of their being at irregular distances from each other, which I accomplished by "wings" at the corners.

This explanation fully answers Mr. L.'s second accusation also, for even if I had not perfected a plan for keeping the bars at proper, regular distances, it is nevertheless a fact that the practical idea of movable frames was invented, and the following summer sufficiently proved their usefulness.

The third contradiction, so called, is, that the glass doors were in the rear of my hives, but I wished to have them like Dzierzon's, on its sides. To effect this, it was not necessary to have new hives made, but simply to turn the hive and make the entrance hole on the other side.

In no way could Mr. King influence my declaration, because at the time it was given, that gentleman had already gone back to America; and while he was present, we were, as a matter of course, not able to understand each other, because he is not able to speak German, and I do not understand English. And I do not know whether I came to the view that Mr. Langstroth claims the absolute invention of said frames and glass supers, through an American newspaper, or a falsely translated expression of Mr. King's. I know very well that the same invention may have been discovered by different persons at the same time, but I nevertheless hold Mr. Propokovitch, a Russian gentleman, as the original inventor of the small frames. The credit does not belong to Francois Huber, because his hive consists of several parts.

I called Mr. Langstroth's hive totally impracticable. I will take that expression back, but must nevertheless declare it to be greatly inferior to those in use in Germany.

I have seen Mr. Langstroth's hive, because Mr. Backus brought one of them from America, in 1858 to the city of Gotha, where we stocked it with bees.

If I had seen the hive in 1851, I would have pronounced it excellent, but in 1858 the improvements in Germany were far superior to it. Mr. King never had any intention to deceive or influence me to his advantage, but, on the contrary, always asserted that he only wanted to find out what was *right and true*, and for this purpose would willingly stand any sacrifice.

At the same time, a misunderstanding is possible, as all our business had to be conducted through an interpreter; and besides my own ill-health made all mental labor more difficult, and my bodily condition makes me now hope that this statement will, and my duty in the premises.

Respectfully,
AUGUST BAXON VON BERLEPSCH.

[For the American Bee Journal.]

Is the Italian Bee superior to the Native?

The Italian bee made its first appearance in this country under the most auspicious circumstances. In the first place, it was a foreign importation and came to us with a European reputation. It is characteristic of the American people to give an extravagant reception to all European celebrities and scions of royalty, and an undue importance to foreign importations. Things of foreign importation are taken for granted to be superior to those we have at home, frequently without proper investigation and comparison; and it is only necessary for cattle, sheep or hogs, drygoods or hardware to be stamped with "imported" to give them superior value in the estimation of four-fifths of our people, when in reality they are often no better than our home-made productions.

The importation of Italian bees was made just at a time when an interest in the subject of beekeeping had been awakened by the publication of two of the best works upon the subject that had been issued in this country. They were extravagantly lauded by the importers and breeders, and eagerly sought after by beekeepers. Our Yankee acquisitiveness, always quick to see where a penny can be turned, saw in this demand a new department of beekeeping, and queen breeders became numerous, flooding the country far and wide with their circulars, enumerating at great length the superior qualities of the new importations.

Nearly all the first purchasers in turn became queen breeders, and all united in blowing the trumpet of their fame, many not having had Italian bees long enough to become acquainted with their peculiarities. The beautiful color of the Italians and marked difference from the natives made them attractive, and the opportunity and advantage it afforded in studying the habits and instincts of this wonderful insect, while changing colonies from black to striped, have made them favorites with the amateur and naturalist. Under such circumstances, it is not at all astonishing that they should become quite popular.

They have now become widely disseminated and fallen in the hands of beekeepers who do

not make queen-raising a business, but keep bees for the surplus honey, and in their sober second thought they begin to ask: Is the Italian bee superior to the native in giving larger amounts of surplus honey?

In some of our bee conventions, which have generally been inaugurated and run by those interested in the sale of Italian bees, some few had the temerity to assert that the Italian bee was a humbug, and no better than the native, while some of the correspondents of our paper more modestly assert their doubts as to their great superiority.

It is not certain that many of the superior claims of the Italians, enumerated at length in circulars of queen breeders, may be greatly whittled down or entirely cut off. That the Italian will gather honey from red clover, or any other honey producing plant, when the native bee, cannot or will not in any paying quantities, is a myth which is about exploded. That in some seasons of great drouth of honey, in some localities they have been known to secure more honey than the natives, has been pretty well established by the testimony of some reliable witnesses, but without knowing from what source the honey was procured, whether from the flowers of plants or the hives of other colonies. That they possess quite an amiable disposition, which makes them in all cases more easily handled than the natives, is no longer contended for by some of the most experienced beekeepers, and generally doubted by most who have tried them.

That their queens, as they are now carefully bred and selected, are more prolific, is generally conceded, but with all the care given to their breeding, we frequently hear of unprolific ones. That they are also more disposed to swarm frequently is likewise granted, but instead of this being a recommendation it is a decided objection with most honey raisers. It is claimed that they stick more tenaciously to the combs, but as frequent shaking off is necessary in the use of the extractor, we may hear this urged as an objection to them. It is admitted by Mr. Langstroth and others, that they will not store honey in empty surplus boxes as readily as natives, but it is claimed that they will store more in furnished combs.

We have but little or no positive evidence that they will give more surplus honey in a given number of seasons, all things being equal, than the natives. In fact, we doubt whether an impartial test and comparison has ever been made. We have all taken it for granted that they were superior to the natives, and in introducing them to our apiaries, the first thing is to get rid of the inferior blacks as soon as possible. If a few colonies of blacks remain in the apiary for a year or two, they are generally neglected, while the Italians have all attention. And should they receive the same treatment and fail to give as much honey as the Italians in one season, this will not be conclusive evidence in favor of the latter, for we know that there will be some qualities in every apiary that will not do as much as others, though everything is apparently equal. Many assign superiority to the Italians

because they are now more successful than when they formerly kept the natives; but there is not in this the least evidence in their favor. The extra cost of the Italians and their being somewhat new, will naturally cause one to take more interest in them, and give more time and attention to them, than was formerly given to the natives, and there are but few of us who have not learned a great deal more about the proper management of the Italians than we knew before. This, with the difference in seasons, and the great pains taken in raising Italian queens to have them crossed with different stocks or importations, and in selecting the most prolific for queen mothers, while the natives are left to take their own course, will easily account for this apparent difference. Let a native queen be taken from the forest of Canada, and another from Tennessee, or from any remote distance from each other. Let queens be raised from one of these, and be fertilized by drones from the other, and with these queens establish half a dozen or more colonies and place them beside the same number of Italians of the most approved stock, in the same kind of hive and with the same treatment. Say that one-half of each kind be put in two-story hives, and the extractor used, while the other half be furnished with surplus boxes, and let the result be carefully watched and compared, not for one season only, but for several. Has this ever been done? Who will try the experiment?

NATIVE.

[For the American Bee Journal.]

"Gallup's blowing up Grimm" does suit me.

When I see W. H. Furman's suggestion that there is little confidence to be placed in Grimm's queens, the good of beekeepers, and a desire to have justice done, impels me to offer my mite of evidence in the case. I make no pretensions to the nicety of discrimination of purity of Italians that some do, yet I have been cultivating Italian bees for ten years, have visited several of the most reliable queen raisers in this country, and purchased queens from others, also imported from four or five different breeders in Europe, and yet I must say that on examining Grimm's apiaries a few days since I concluded they were as reliable for purity as anything I could get either in Europe or America and consequently purchased seventy-two colonies out of Kate's apiary of about one hundred and thirty, of which I think there was not more than fifteen colonies that I could say I know they are not pure. His stock was not the brightest but certainly uniform in markings.

I think Grimm's success consisted mainly in his obtaining an abundance of reliable queens to breed from, and Italianizing thoroughly a large force of bees so that he has less need to be always manipulating with them. I only regret that Mr. Grimm cannot make it suit to cultivate queens extensively for the public. I brought my seventy-two colonies near six hundred miles at an expense of \$1.06 each. I had them re shipped at Chicago. I slept four nights in a freight car. Through the day I watched their condition, and

found them benefited by receiving half a pint of water each two or three times a day while they were excited. I also kept the outside of the hives and the inside of the car wet to keep them cool. Bees have gathered more than the usual amount of honey from fruit bloom this season.

Cadie, Ohio, May 12, 1872.

R. WILKIN.

[For the American Bee Journal.]

There has been a very great loss in bees the past winter in this vicinity and north of us. Fully one-half of the bees that were put in winter quarters, seemingly in good condition and with a great plenty of honey (and I think, perhaps, too much) without apparent cause. My bees in the Langstroth hive and others in this neighborhood wintered well. In tall hives, seventeen inches high, with frames I made, thinking them better for wintering bees, I lost five out of seven, and my neighbor, having the Kidder hive, has over two hundred stocks, and lost more than half; and another had eighteen stocks in box hives, and lost seventeen. Fully one-half the beekeepers lost all.

For the benefit of others I will narrate my own experience. After my bees had been out eight or ten days, on the 8th of April, the warmest day of the season, about noon a swarm of bees came to my apiary and entered one of my full hives. Soon I saw my Italian queen come out. I caught and caged her. The bees continued to come out and formed in a cluster under the bottom board, and another queen, nearly dead, having been stung, appeared. I put her back in the hive, supposing the bees would come back before night. Soon another swarm came from my near neighbor's; three came before night.

During this time three of mine left, and the fourth commenced to leave, whereupon I closed them up and saved them. I caught and caged the queens of two hives. Towards evening I took what bees I could get on the outside of the hives and put them in the two hives of which I had the queens, and returned the queens into their own hives.

One is all right, I think. But the other was the next day minus bees. All these swarms had left honey in abundance. Mine had from thirty to forty pounds of sealed honey, and no brood in either of them. Some swarms had left their hives previous to this day, but this day was a perfect stampede, or day of jollification and death in this place. This is a new thing or freak in bee-culture that I do not understand, and is quite discouraging after having successfully wintered them. What is the reason of their leaving full stores to die? Not one swarm gathered in a bunch, so that they could be hived. Is it possible that the queens were worthless? I lost five stocks in wintering and three by leaving.

DAVID BROKAW.

Oconomowoc, Wis.

Ex-Mayor Winthrop of Calais, Me., recently discovered, when removing an old chimney, one of the flues well stocked with honey.

THE AMERICAN BEE JOURNAL.

Washington, July, 1872.

All communications and letters of business should be addressed to

GEO. S. WAGNER,
Office of the American Bee Journal,
WASHINGTON, D. C.

Mr. D. L. Adair, of Hawesville, Ky., requests us to inform numerous correspondents, that he is in nowise responsible for the delay in the publication of the proceedings of the North American Beekeepers' Association. He promptly made out the report of the proceedings, and forwarded them to Mr. N. C. Mitchell, a member of the Publishing Committee, and is therefore relieved from any further responsibility.

We have received several communications attacking the business character of various queen-raisers in this and foreign countries, which we for the present withhold. If upon inquiry we find these accusations to be well founded, we will publish the communications, in order to prevent others from being awindled.

We would warn young beginners in bee-keeping against endeavoring to increase their stocks too rapidly. It will inevitably result in disaster and discouragement. Long experience in bee-keeping will enable the apiarian rapidly to increase his stocks, and when winter comes, have them all strong and healthy, while a beginner will find himself at the close of the season the possessor of a number of weak and sickly stocks, and in all probability will commence the next season with doctoring up feeble stocks, or what is more than probable, abandoning bee-culture, all his bees having died.

We by no means adopt the views expressed in the article "Imprudence of Beekeepers," published in this number of the Journal. We are no believers in monopoly in knowledge, nor do we, on the other hand, fear that its spread will hinder the prosperity of any beekeeper. The teachings of experience are all on the other side. The various articles and discussions relative to bee-culture; the comparison of views, and modes of working in the apiary, as published in this and other journals devoted to bee-culture, have done much, very much to make beekeeping what it now is. We believe that bee-culture has not yet reached perfection, but that there is still much room for improvement and progress in the works of the apiary. Honey is still a luxury, but the time will come when it will be within the reach of the poorest, and the apiary will then prove more profitable than now. Let us have plenty of honest and earnest discussion on bee-culture, and there will be no danger of retrograde movement.

We trust our friends will send us full accounts of their swarming operations; of abundance or failure of the honey product, and any other matters that may fall under their observation during their busy season.

We have received from Messrs. Geo. P. Rowell & Co., a copy of their AMERICAN NEWSPAPER DIRECTORY, for 1872. It is well printed, well arranged, and will prove of great value, not only to newspapers, but to advertisers.

We have received from the Commissioner of Agriculture, a copy of the proceedings of the National Convention of Agriculturists, held in Washington City, February 15th, 16th, and 17th, 1872.

Correspondence.

I have been in this county over two months, and have only found three colonies of bees in the county and can hear of no more. I have scattered over a peck of clover (White, Dutch and Alsike) along the roads and by-places, and intend to sow buckwheat in the next month and then have some of my Italians sent out here. Will write you how they flourish "on the plains."

O. A. A. GARDNER.

Kansas.

Bees have not done very well here this Spring. It is so very dry that we have had to feed all the time to keep them along, but we have had a nice rain and white clover is beginning to bloom, so we are in hopes we shall yet have a good yield of surplus honey. It has been a sad winter for beekeepers, some have lost almost all, and others a good share of their pets, with dysentery, but we will try again, although cast down we are not discouraged and have learned some profitable lessons by sad adversity. We wish the Bee Journal much success; do not see how any one can do without it; know we could not, for every number is worth more to us than the whole year's subscription. We say, Hurrah for Gallup's *big hives*! but think larger frames will beat it; at least we will try the long frames.

C. E. Cox.

Hudson, Ill.

The past year has been the poorest for bees in this State ever known, very many have lost every swarm. I saved nine out of eighteen colonies put in the cellar. I left two strong colonies in upright hives out doors (in a bee house), they both died. I have yet to learn of any one in this vicinity who saved as many as I did. I find plenty of honey in the hives, and cannot account for their death. Up to this time, June 10th, we have had but two days this year that bees could fly freely all day.

M. G. PALMER.

Portland, Me.

About three-fourths of all the bees in southern Minnesota died of bee dysentery or cholera in winter quarters or soon after placing them on their summer stands, and many of the surviving stocks are so feeble that it will require much material aid to build them up. Of 137 stocks I placed in my bee house and cellar, I lost 81. I equalized all as nearly as I could, of bees and honey, in September and early part of October.

I found quite a number beside each other on their summer stands that were in every respect as nearly equal as they possibly could be last fall, when I placed them together in winter quarters; this spring found some of said stocks dead, presenting that oft described, loathsome appearance, while their neighbors came out clean as they were in September, with loss of few bees and little honey. Tell friend Novice that he must look for some other cause than *cider mills* for that loathsome disease. Our State does not own a single cider mill and yet the disease has raged here fearfully. All the causes given by our great "bee fathers," are entirely unsatisfactory to me, and I cannot find any satisfactory cause myself.

JOEL BRITTS.

Mantorville, Minn.

With your permission, I will give your readers a few lines concerning bees in this section. I put 155 stocks into the cellar last December. I set them out the middle of February and found them all in good condition, except ten queens which failed. There is no disease here only what is caused by long confinement and improper ventilation. Practical beekeepers have lost heavy here; cause, the want of proper care in wintering. The farmers have lost no more than usual. It would be well for beemen to look more to winter and spring management, and say less about patent humbugs. I am using the Langstroth hive, and find it the best I can use. I keep the Italian bees and find them great workers, but think the queens have mated with a jack, as the bees are very mulish. I would like to unite with the beekeepers in the northwest and establish a honey store in Chicago. It is the only way to keep up the price of honey. I hope all beekeepers will consider the matter and act at once.

S. W.

Bees came out very poor here. Many lost all they had.

THOMAS LASHBROUK

Waverly, Iowa, June 10, 1872.

There are but few bees in this part of the country. The long-continued cold weather, with no day warm enough to give the bees a chance to discharge their faeces without losing their lives, used up a large portion of them. In March they got thawed out, but the weather became cold again before the combs became dry, and the balance of the bees became chilled and died.

L. C. WHITING.

East Saginaw, Mich., June 13, 1872.

[For the American Bee Journal.]

MR. EDITOR:—As facts are what we want, and not theory, I will give you a few facts in regard to wintering bees on their summer stands.

I bought a stock of bees of one of my neighbors last winter, and in the first part of February I moved it home. They were hybrid Italians, in a frame hive 14 by 14 and 14 inches high, single thickness, and a board laid on the top, with cleats nailed in the under side. *The cover had warped up at the edges, till the bees passed out and in freely*; all the protection the hive had from the weather, was a board fence on the north. I examined them a few days after I moved them home, and found they had brood in four frames. It was the strongest hive out of thirty. I lost five stocks that were in double hives with carpet spread on the frames and the honey brand on the top of the carpet. There were more or less mouldy combs in all the hives with carpet on the frames. I believe from what experience I have had, that it is better to winter a single hive on the summer stand than a double hive, as a few hours' sun will enable them to get at their stores. Those that I lost had consumed all the honey in the cluster, and the frost on the combs prevented them from moving far. I believe that if bees can be kept dry, they will never freeze.

As for wintering in special repositories, I think that requires more care than the majority of beekeepers will be likely to give them. I should like to hear from some who have been successful in wintering bees on their summer stands, in regard to the exact amount of upward ventilation necessary. This makes the third poor season for bees in this locality. The drought and cold winter killed nearly all of the white clover. Most of the beekeepers here are sick of the business. I have had over one hundred stands of bees offered to me on their halves, and I keep their half of the swarms, at \$2 per swarm. In my last communication I made a statement in regard to bees eating grapes that you seem to doubt. Now if it were necessary, I could bring witnesses to prove that bees have been seen to alight on sound grapes, and in a very short time they would have their suckers under the skin of the grape. I have seen vines loaded with grapes with scarcely a sound one on the vines, and at the same time the bees were so thick it was unpleasant to gather the grapes.

S. W. LOUD.

[From the Utica Herald.]

Bee-Culture.

We give below extracts from an interesting address delivered before the Clinton (N. Y.) Rural Art Association on the evening of June 12th, by S. P. Landers, Esq.:

BEE-CULTURE.

To the naturalist and to every curious observer, a hive of bees, in its best working condition, presents a scene of the most lively interest.

The instructive ingenuity and habits of this little insect have never failed to attract the

attention and study of some of the greatest minds in all ages of its history, and no one has ever failed to discover in its being and life things marvellous and almost incredible to believe. But leaving the natural history of the insect out of the question, it is proposed to speak in this paper only of the practical part of bee-culture.

In a perfect hive of bees there are three kinds, viz., "The queen," the mother of the whole colony; "The worker," the producer of the neuter gender, and "The drones," the male bees who take up room in the hive but bring in no honey.

THE QUEEN

is a fully developed female, while the workers are females imperfectly developed.

The queen is impregnated by copulating but once with the drone while on the wing, high up in the air, and in forty-six hours after her fecundation all things being right, she begins to lay eggs, and it is stated by those who profess to know, that she is capable of laying 2000 eggs in twenty-four hours. In the time of Huber, a blind Swiss naturalist of great celebrity, it was supposed that the ovaries of the queen contained regular succession of the different kinds of eggs necessary to produce the three kinds of bees we find in a hive. He made an experiment which proved to him that if the hive contained no drone comb, the queen dropped her male eggs at random and no males were reared, and so if there was no worker comb, she dropped her worker eggs anywhere and no workers were produced.

But it is now the received idea that the eggs of the queen are all alike, and that it is only the different kinds of cells in which they are laid, and the different kinds of food and treatment they receive in their embryo state, that make the three kinds of bees. All eggs deposited by the queen in drone cells become drones, and the same is true of the worker and the queen. The queen has a sting which she only uses to sting another queen. She lives four or five years if no accident happens to her, but in the after part of her life, like an old hen, ceases to be fertile.

The instinct of the workers teaches, then, the necessity of having a queen that will lay eggs so as to keep their numbers good, and they prepare to raise another queen to take her place. This they do by building a queen cell, and if, when the cell is about half done, the queen does not deposit an egg in it, they take an egg from a worker cell and put it into it, and by feeding the embryo queen with royal food, and, perhaps by some other process only known to themselves, the egg that would have been a worker, if it had remained in a worker cell, becomes a queen.

THE DRONE

is the male bee and has no sting—no means of gathering honey or secreting wax, or doing any work necessary to their own support, or the common good of the colony. Like some in human society, they are non-producers, and live by others' toil and industry.

THE WORKERS

are imperfectly developed females, and they do all the work that is done in the hive. They secrete the wax, they build the comb, gather the pollen for the young, and the honey for all, feed and rear the brood, and fight all the battles necessary to defend the colony against harm.

THE ITALIAN BEE

of late has been introduced into different parts of this country and Europe, and much has been said and written about their superiority in every respect to our common black bee. It is claimed that the queen is more prolific—that they can gather honey from the second crop of red clover, and from other flowers that the native bee does not visit—that they are more hardy, less irascible and more easily managed. This variety of bee was accidentally found in a small district in the Alps of Switzerland and northern part of Italy, by a captain in Napoleon's army. In 1855, Messrs. Wagner & Jessop, of York, Pennsylvania, made an unsuccessful attempt to introduce this bee into the United States. In 1858 and 1859, another unsuccessful effort was made by Messrs. Wagner, Colvin & Langstroth.

Later in the same year, seven living queens were received by the last named gentlemen, but these all perished in the winter of 1860. About the same time Mahan, of Pa., made importations, and subsequently in the same year (1860), Parsons, of Long Island, received an importation of this kind of bee from the northern part of Italy, and from these importations bees have been distributed to the many apiarians throughout the country.

When it is once established that the Italian is superior in the points claimed, the progressive beekeeper very naturally desires to adopt them in place of the black bee. But how can he do it is the question? How can he substitute the one for the other?

To do this, the first requisite is to have the movable comb hive. Without this, it would be almost useless to Italianize a swarm of bees and keep them so for any length of time.

To Italianize a hive is to substitute a pure Italian queen in place of the native queen, and the workers and drones will soon be like the mother. As the process of doing this is so well described by Mrs. Tupper, I shall use her words, as she has had experience in this business. "The queen being the mother of the whole colony, it follows if a pure Italian queen be given them instead of their own, all the bees reared after her introduction are Italian.

TRANSFERRING

bees from the box hive to the movable frame hive is a very simple and at the same time very important process. Capt. Hetherington, of Cherry Valley, who probably keeps the largest amount of bees of any one in the United States, explained his process at the Beekeepers' Convention in Utica, to be as follows: He takes the hive intended to be transferred into a room with the windows all darkened but one. The bees are stopped into the hive and when removed into this darkened room the hive is inverted

and a box placed on the top, rapped upon some minutes, and then this alarms the bees and they go immediately to their stores and fill their sacks with honey. Bees when filled with honey will not sting, and this is the object of alarming them by rapping on the hive. After waiting some ten minutes the box on the top of the hive, into which the most of the bees have crawled, is taken off and placed upon the floor with the open side down. The comb is then taken from the old hive and put into the frames and then fastened till the bees stick it together when the fastenings are taken off. Capt. H. fastens by means of the thorns of the red haw put through the top and sides of the frame into the comb, but Quinby & Root fasten by two small sticks wired together, top and bottom, with small wire. This latter method I should think the most expeditious and cheapest. The bees that do not crawl to the drum-box fly to the window, and when all the comb is transferred from the old hive to the frames, the new hive in which are put all the frames with comb in them, is placed directly under this window, and the bees from the box and the window are brushed into it, which completes the operation. At Quinby & Root's I learned that 15 swarms was an ordinary day's work for one man and two boys. If the bees are transferred when there is brood in the comb, it is essential that the brood should be placed together in the new hive and not scattered through it, as a certain amount of heat is necessary to the hatching of the young bees. In transferring, all the drone comb should be rejected, and all the frames should be filled with worker comb, if possible, excepting, perhaps, some corners of the frames which may be left open for the bees to fill with drone comb, which they are very sure to do. It is a great drawback in the profits of bee-keeping to have ten times more drones than is necessary, which is often the case. They consume the profits of the worker. Without the movable or "leaf hive," this thing cannot be regulated by the beekeeper.

ARTIFICIAL SWARMING,

where an increase of stock is desired, is the only true and safe way. From the early history of bees up to the present time, natural swarming has been, and even is now, the common method practiced. The beekeeper is on the alert when a swarm is expected out, and he cannot leave home to go to church even, for fear the bees will swarm in his absence and be off for the woods. But with the movable comb hive new swarms can be made at pleasure and all swarming can be regulated according to the wishes of the beekeeper. He can have new colonies made, or, by destroying the newly-made queen cells, he can prevent all swarming. To make a new swarm, take one of the best of the old colonies and put it in a new place, then take frames enough from that and several other hives that are filled with brood-eggs and honey and put them into a new hive, and put this hive where the old one stood. The bees that are away in the fields when the old hive is removed will return to the new hive, and thus a new swarm is formed. If the new swarm can be

furnished with a fertile queen or with a queen cell nearly matured it is so much gained, but if not they will raise a queen from the worker eggs they have. But if a queen can be furnished the new swarm, some twenty days are gained, which is very important in the honey season of the year. It is well to keep the stocks equally strong by giving the weak ones comb to brood from the strong ones. Other methods of artificial swarming are practiced, but it is generally allowed that the one here described is the best.

THE PROFITS

of bee-culture, like all other kinds of business, must depend upon the knowledge and attention given to the subject, the price of honey and other contingencies. It is a kind of business requiring a good deal of patience and a thorough knowledge of the habits and wants of the bee. It is but now and then we find a person competent or that will give his bees attention enough to realize any profits. The bee is universally neglected and left to take care of themselves, and hence, as should be expected, no profit is realized. During the past winter hundreds of stocks of bees have perished simply for want of trouble to remove them from their summer stands to some comfortable winter quarters. Men that cannot afford to do even this little work for their bees have no reason to expect profits from keeping them. Captain Hetherington, of Cherry Valley, sent to market in one season 2,000 pounds of honey, which sold for \$7,000.

"According to the census of 1850, there were produced in the United States and Territories 14,853,790 pounds of beeswax and honey, while that of 1860 is 1,357,564 pounds of beeswax, and 25,058,991 of honey, showing an increase of about 77½ per cent."

"Mr. Quinby, in his circular for 1872, states that Mr. Hildreth, of Herkimer, obtained in 1871, from thirteen hives, 1,500 pounds of box honey, and doubled his original stocks."

He also states that Mr. Underhill, of St. Johnsville, obtained from fifteen colonies, six swarms, 1,050 pounds of box honey, and over 100 pounds of extracted honey.

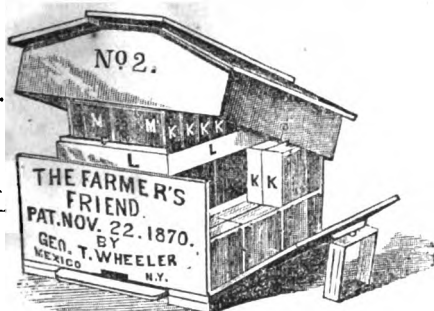
In his own apiary, he says, during the past year, (1871) of those swarms that he took the trouble to weigh, one filled forty boxes, weighing five pounds each (200 pounds), another thirty boxes. "From one we extracted 220 pounds. Very many others furnished as much more, but were not weighed."

In 1870 one hive furnished 361 pounds of extracted honey. The yield in one week, last of June, was eighty-three pounds.

In my own apiary I have had up to this time only one common box hive, but during the last year I received from eight hives in the spring, and two of them not strong, eight new swarms and 550 pounds of box honey.

But others may keep bees and give them no attention, and their profits will be very small, if they do not lose their entire investment. Bee-culture, well managed, is a good business, but if left to take care of itself, as is generally done, it had better be let alone.

A NEW BEE HIVE,



With improved honey boxes and frames. Two styles, Nos. 1 and 2. Illustrated Circular and price list sent free.

GEO. T. WHEELER,
Patentee and Manufacturer.

T. H. B. WOODY,
General Agent,
Manchester, St. Louis Co., Mo.
June—1872.

BROKENSTRAW VALLEY APIARY.

CHOICE ITALIAN QUEENS, FOR 1873.

I have made extensive preparations for the breeding of choice Italian queen bees. Great care taken in the selection of mothers, and due attention in crossing. I am favorably situated for the purpose of breeding and shipping. No black bees within two miles, and but few within five miles of my apiary.

Also—full stocks of Italians for sale at all seasons.

Address,
W. J. DAVIS,
P. O. Box 91, Youngsville,
Warren county, Pa.

Feb., 1872—6ms.

ITALIAN QUEEN BEES.

I shall breed Italian Queen Bees for the coming season, from imported mothers of undoubted purity. Safe arrival and purity guaranteed, in every shipment. Queens sent by mail.

Address,
T. H. B. WOODY,
Manchester,
St. Louis Co., Mo.

Dec., 1871.—tf.

HIVE FACTORY FOR THE WEST.

ESTABLISHED IN 1860.

Have made and sold from 400 to 1,000 Langstroth Hives each year since.

Hives and boxes always on hand and for sale at reasonable rates, either complete or in K. D. condition.

Send for price list. Address,
W. T. KIRK,
P. O. Box, 1140,
Muscatine, Iowa.

Mar. 1872.—3 mo.

ITALIAN BEES.

I wish to say to my friends and beekeepers generally, that I have supplied my apiary with a superior lot of imported and home-reared queens of *undoubted purity*, for the coming season.

Italian Queens for sale. For circular address

R. M. ARGO,
Lowell, Garrard Co.,

Feb., 1872—5mos.

Kentucky.

ITALIAN QUEEN BEES.

We will send by mail, Italian Queen Bees of this year's rearing, whose hatching brood shows three distinct yellow bands. Price, \$4 each, or \$40 per dozen, postpaid.

JOSHUA SHAW & SON,
Chatham Center,
Medina Co., Ohio.

Feb., 1872—7mos.*

HONEY EXTRACTOR.

I offer to bee cultivators a Honey Extractor, which is acknowledged by those who have used it, to be the most substantial and convenient in the market. For circulars, giving cuts, with prices, &c., Address,

HENRY W. STEPHENSON,
Apr. 1872—3 mos. Cincinnati, Ohio.

COMB GUIDE PRESS.

With this instrument a child can put Wax Comb Guides on twelve frames in five minutes.

Price of the instrument, delivered at the Express office, \$1.25. Send stamp for a sample.

COMB-FASTENING PRESS.

This implement fastens quickly and substantially Dry Combs, or Comb Foundations, in the frames. Price, \$2.

Comb-Guide Press and Comb-Fastening Press, together, \$3. When ordering, send the inside length of the top bar of your frames.

Patent solicited.

April, 1872.—tf. CH. DADANT,
Hamilton, Ills.

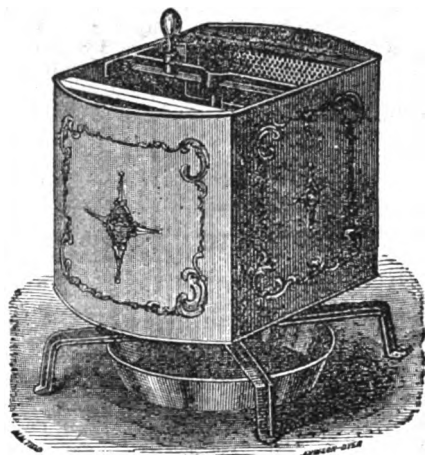
PROGRESSIVE BEE CULTURE

Is the title of a little book that explains all the mysteries of the bee hive. Price 25 cents, by mail.

THE "NEW IDEA" BEE HIVE, doubles the yield of honey. It controls swarming, is easy of access, and can be handled by a woman or an invalid.—With a view to its general introduction I am selling county and small territorial rights at half price, and offering other unusual inducements.

D. L. ADAIR,
Hawesville, Hancock Co., Ky.
May, 1872—2mos.

THE PEABODY HONEY-EXTRACTOR

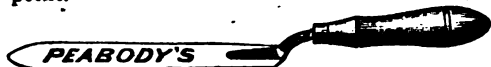


(Judging from the many flattering testimonials we have received from our patrons) is still taking the lead among the most prominent beekeepers of the country. Having permanently located at Bloomington, our facilities for shipping to all parts of the country are much better than formerly. Orders are already coming in larger than ever, and those who wish to secure a Machine for the coming season would do well to send early, as we may not be able to supply the demand. Send for our new Circular for 1872, and see what beekeepers say of our Machine.

Price of single Machine and two Knives, \$15 00
Single Knife, by Express, 1 00
" " " Mail, prepaid, 1 25

Address, J. L. PEABODY & CO.,
Bloomington, Ill.

N. B. We have agencies in different parts of the country, and those ordering from a distance can have their Machines sent from the nearest point.



THE PRAIRIE FARMER.

The Best Paper for the Least Money.

SOUND EDITORIALS,

INTERESTING CORRESPONDENCE,

COSTLY ILLUSTRATION,

CHOICE EXTRACTS.

Now is the time to subscribe!
Now is the time to get subscribers.
Splendid premiums or cash commissions.

SAMPLE COPIES FREE.

Send for them. Read them. Circulate them.

PRAIRIE FARMER CO.,
674 Wabash ave., Chicago, Ill.

ITALIAN QUEEN BEES.

I expect to rear, for sale, this season, a limited number of

Choice Italian Queens,

bred when desired by purchasers, exclusively from imported queens, and fertilized if possible by drones from imported mothers.

The price of such queens, when fully tested, by examining their hatching brood in large nuclei or full stocks, will be ten dollars. If sent before they are tested, five dollars.

For further particulars, send for circular.

L. L. LANGSTROTH,

Feb. 1872—tf Oxford, Butler Co., Ohio.

BEAUTIFUL ITALIAN QUEEN BEES.

AT THE GYMNASIUM CANTONAL OF TESSIN, IN
BELLINZONA, SWITZERLAND.

1. For an Italian Queen Bee, accompanied by a sufficient number of workers, and provision for a thirty days' journey packing included, and freight to Bremen, Hamburg, Havre, or Ostend, prepaid, if sent during April, 11 francs; during May, 10 francs; during June, 9 francs; during July, 8 francs; during August, 7 francs; during September, 6 francs, and during October, 5 francs.

2. Queens will be sent only in parcels of four, six, eight, twelve, or twenty-four.

3. All queens sent, to go at the risk of the party ordering them. Good and careful packing guaranteed.

4. The cash must accompany every order, or it will not be noticed. Address,

J. A. CHEVALLEY,

Professor at the Gymnasium Cantonal
in Bellinzona, Canton of Tessin, Switzerland.

Jan'y, 1872—tf

APIARIAN SUPPLIES.

Send for our circular of Queens, Full Colonies of Bees, Hives, Bee Books, Bee Veils, Queen Cages, &c., &c.

We furnish Hives of all the leading improved varieties, with or without bees.

Pure and Prolific Queens at reasonable rates. Circulars free. Address,

OWEN & LADD,

Brentwood, Williamson Co.,

Feb., 1872—tf.

Tenn.

CAUTION TO BEE-KEEPERS.

All persons using the Triangular Comb Guide, or "bevelled edge," in Langstroth hives, are cautioned against paying K. P. Kidder, or Agents, for such use. At our request, he has sued us, and we believe the Courts will soon decide that the said Guide is PUBLIC PROPERTY, and that we are not infringing his rights in the Clark Patent.

L. L. LANGSTROTH,

Oxford, Ohio.

R. C. OTIS,

Chicago, April 20th, 1871. Kenosha, Wisconsin

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VIII.

SEPTEMBER, 1872.

No. 8.

Letters from Chas. Dadant.

ON BOARD OF LA VILLE DE PARIS,
July 21, 1872.

MY DEAR FRIENDS:—The first days of our journey have been extremely agreeable, for the sea was very calm. We left New York on the 13th, at 11 o'clock, A. M. Our vessel was the fourth steamer that started from New York on the same day. Two of these steamers, being only a few miles ahead of us, were soon outsailed, but a boat (belonging to the new Liverpool Steamship Company), the White Star, did not seem disposed to allow us to beat her. This boat had crossed the ocean in the fastest time on record, seven days and fourteen hours. She was consequently taking pride in keeping ahead of us. The next morning she still was ahead, almost out of sight. At noon we were by her side gaining ground. In the evening she was far behind and disappeared during the night. We will be in Brest to-morrow, and at Havre on Tuesday, after ten days sea travel.

I suffered but little, although we had two days of very rough weather; but these two days I spent in bed, and I could hear from my cabin during the meals, the rattle of broken glass, plates and bottles. My hive trunk was an object of general curiosity. Many questions were asked, and I had to recite volumes of bee-culture, which seemed to interest my hearers greatly, although many of them had never heard a word about bees. A brother-in-law of the editor of *L'Esperance de Nancy*, made me promise to send him articles on beekeeping for the paper. On the whole I am in good health, but greatly tired of sea life. What would it be, if instead of ten days we were to remain fifty days on the sea, as of old? I see around me many people who seem to amuse themselves greatly, but how I differ from them! Family life is so sweet when compared to all that noise, that one feels most the value of it when it is wanting.

PARIS, July 25.

I am in Paris. I did not write from Havre, because I had no time. We arrived in this city on the 23d, ten days after our departure from

New York. You will easily imagine the emotion that took possession of me when I again viewed my native country after such a long absence. As soon as we arrived in sight of the French shores, a young Frenchman began to sing the hymn: *Vers les rives de France*. (Towards the shores of France.) He first sang alone, then a little group was formed, and soon all the passengers were gathered, singing this beautiful song. When singing the last chorus: *Voilà, Voilà, la France* * * * *riveage béni*. (There, there is France. * * * blessed shore.) She is really beautiful, our beautiful France; so beautiful, that it takes a big effort to leave her, and that one cannot see her again, without an immense thrill of pleasure; so beautiful that all like to see her and to inhabit her shores. They say that the French are light minded. It is true, but they are gay, and that is something, for gayety is extremely attractive. In the train from Havre to Paris, I found myself in company with two middle-aged French ladies and a young English lady, accompanied by her husband. The two French ladies were gay and as playful, and kept up the interest by their remarks. But the English lady kept as cool and as quiet as a Roman matron of the old ages. Being French by birth, I am probably a partial judge, but I prefer the French character to the English.

Happily our American ladies have not inherited the English character altogether. I find one fault, however, with them; that is, the size of their chignons.

Here in Paris, I can find none of the kilogrammes of rags with which some American ladies overload their heads. Nor do I see any of the pyramidal hats that are the pride of the most eccentric. They are out of fashion in Paris, and I hope they always will be.

Having landed in Havre very late on Tuesday, I started from that city the next day, in the morning. Before my departure, I went to see the boat agent to ascertain the cost of transportation of bees.

I arrived in Paris yesterday evening at six o'clock. I have been out on business since daylight, and I am going to take my breakfast with M. J. Pelletau, the editor of *La Culture*.

I will write more at length from Italy.

CH. DADANT.

[For the American Bee Journal.]
Novice.

Please, Mr. Editor, can't we have a hive too? We know you will think, and many of our "large family" say, there are too many already and that the more we get, the worse we are off, and that there are patent hives enough for the next thousand years, etc.

But, Mr. Editor, "our hives" is "nothing new," and, of course, is not patentable, we hope so, at least, and the novelty, if it is that, it is entirely stripped of the thousand and one valuable, all important features that worry the patient beekeeper and waste his valuable time.

Now, then, our hive is simply a square box open top and bottom.

As we are speaking to a generation possessing brains and using them, we will give our reasons as we go along. For instance, we *must have* a movable bottom, that the lower story may be used as an upper one, and vice versa. We dispense with a portico, also, for the same reason, and because it takes lumber, makes the hive heavy, harbors spiders, and gives no real advantage that we know of.

The stand for the hive and bottom board are one and the same thing, for when a hive with a bottom board stands on another board, we have the space between them wet and damp much longer after rains than when a single board makes both, and for this reason we advise all hives having permanent bottoms, to have for a stand, simply a frame of four pieces of inch board, two inches wide, and made one-half inch smaller each way than the bottom of the hive; thus allowing the rain to run down without being carried under the hive.

The bottom and cover are one and the same thing, and can be used in either capacity, so that if you have a stock of one you have both, and there ends our hive, when we have told you how to make the all important top or bottom.

Suppose you make a frame just like the hive, only two inches in depth instead of full depth, and when this frame is strongly made by halving in the corner, halve in for cover a sound board, but leave no projection at all, and nail it firmly from both ways, so that warping and opening is impossible.

When used for a cover, both hive and cover are beveled, so that the crack or joint carries the water outward, and when used for a bottom board the cover is also beveled around the outside edge, that the hive may fit over it for the same reason.

Accordingly, any number of hives may be piled on each other, or any number of bottoms or covers or all together, and all fit and no projections. They can be packed closely in winter quarters, or in a wagon or in shelter, empty, and if they are to be handled we can walk off briskly with a hive under each arm.

But the bottoms will drop off and the covers get away!

No they don't, when we have had our say, for you are to get some pieces of galvanized iron-wire, as large as a knitting needle, and three inches long; bend each end at right angles one-

half inch, and when the bottom is squarely in place drive these staples with one foot in the bottom and one in the hive. And now for the entrance, which cannot be of blocks, nor do we want them, for they are loose and get lost, and yet, we want an entrance that can be enlarged and contracted. Nothing loose, that can be lost; nothing expensive; nothing that will get gummed and stick fast, was a problem we long sought to solve, but do it now very simply, thus:

Whittle out the lower inside corner of the front end board on a curve deepest in the middle, but not deep enough to remove any of the outside corner, or we should spoil it if ever used for an upper story.

Now, if you slide the hive forward so as to project over the bottom, we have an entrance, first small in the middle, and then enlarging to any extent, if we move it far enough, or so far as our staples will let it slide; and when we close a hive it is closed *surely*, and we need have no fear that robbers may crowd it open as they do sometimes the blocks. Use the door step or alighting board described last month.

The cover may be hinged on one side, and if you make a cloth quilt to cover the frame so closely that no bee can get by it, you can close a hive full of bees as quickly as a carpenter closes his tool chest. As a visitor remarked when we opened one of these hives, showed him two queens peaceably presiding therein, and then put them both back and closed the hive before he or they had time to be frightened.

The quilt, if properly made, can be spread over angry bees, and they will hush like a brood of chickens, as such closing up does not hurt them at all, and those remaining outside quickly seek the entrance when brushed away. A cover that is hinged can be opened and closed with one hand, and if in a hurry, we frequently remove a frame with the other. Taking off a cover with both hands and stooping to lay it down is tiresome, more especially if it projects over the hive two or three inches.

When one hive requires more room we simply place as many frames as we wish in another hive with no cover or bottom, and raise the original to allow this to set under it, or if we want a hive spread horizontally, place two tight together—nothing hinders—and cut passages when or as large as you like between them, and you then have every advantage, except a double division board, and this may be better if one is good. The entrance can easily be made on one of the long sides if preferred.

No water gets into this hive, as the top is one solid board, and no rain drives in the entrance, as it is directly upward.

The hive as well as covers, should be all halved together, as they have no permanent bottom to give them strength.

The halving or rabbetting is all done on the end pieces, viz.: across the top for the frame to rest on, and same depth down each end. The rabbit that holds the frames should be low enough to allow about three-quarters of an inch for the quilt to drop in, to close when laid on top of frames. Rabbit in ends of end piece deep

enough to let side pieces in flush. Thus you will see the side pieces of hive are just as long as extreme length of your frame, adding a little for end shake.

Grain of the lumber should always run horizontally, to save trouble from shrinking of lumber, and for this reason allow considerable room below frames over bottom board.

A hive made thus should be always kept well painted. We use the Averill chemical paint, and it is just fun to paint them when piled up in square pillars.

In June, July and August, we think they should be shaded, but the rest of the year the first chance the sun has at them (no projections), we think a positive advantage, and that they cannot have too much.

About 10 feet of lumber only is required for such a hive, single story, and the whole cost should not exceed \$1.00, without frames. A very good way to secure a perfect fit of cover and bottom is to first get simple complete box, with top and bottom, made of one solid board, halved in as are also the corners. This box for a Langstroth hive should be inside $18\frac{1}{2} \times 14\frac{1}{2}$, and depth about $15\frac{1}{2}$ inches. Saw off $2\frac{1}{2}$ inches of the top clear around, dropping the handle of the saw so as to get the bevel to shed rain, and then hinging the same slice, so that it opens just like the cover of a trunk.

Saw off the bottom in the same way, and you have, after turning it over, a complete bottom board and stand. Now, the hive itself is complete, except the rabbet to hold the frames, and if you have only one partially railed this part, you can take it apart to cut the rabbet, after which the nails can be replaced in their holes, and the whole nailed securely from both ways, for we must have the hive so that when lifted alone there will be no danger of springing out of shape.

Now, we hereby challenge the beekeepers of the world to tell us what can be accomplished with their patent hives that cannot be done with this, simple and unpretending as it is. The expense is not over one-half that of hives generally used, and the labor of handling in the apiary, it seems to us, less than one-half. If you wish to raise queens, saw a place in the ends and bottom to slide in a sheet of tin, and you can use ten frames as before, and queens raised in one-half.

We bore a one-half inch hole in the end opposite the entrance, and cover with the same quilt, which permits either side to be turned up without disturbing the other. By using three end division boards, we have raised a large number of queens with more satisfaction than we ever did before. When a queen is removed and no more wanted, slide out your sheet of tin and all is well. In many cases the workers have passed freely over the division boards or tins, with no quarrelling, and no injury to the queens, even when four were kept in the hive.

In this case an entrance is made in each of the four sides, and two frames used in each apartment, which allows easy removal for inspection, and the queens can be kept until their brood hatches in these nuclei.

Now, brother beekeeper, what is to hinder wintering two queens in such a hive? We shall try several, and we need not enumerate the advantages of extra queens at any season. Suppose we had two weak colonies in the spring, could we not unite them in this way without killing either queen, and then using one of them at the proper time elsewhere?

I presume no one will say that we might thus get too much brood in a hive, say in April or May for instance.

We are indebted to Mr. C. C. Miller, Marengo, Ills., for the plan of dividing a hive, see page 88, vol. vi. He uses six apartments, one frame each, and, we think, stationary divisions, but we think, we prefer only four, and two combs each. Many thanks, Mr. Miller.

Who has wintered two queens in a hive, and is there any difficulty? We cannot think there is any difficulty.

Those who are inclined to doubt that coffee sugar syrup, properly sealed up in frames of comb, is not a sure remedy for the bee-cholera, would do well to read carefully the large amount of matter on that subject in the back numbers, although no one seems to have thought, before we mentioned it, that as bad food was the only trouble, chemicals from food or sugar would be an infallible remedy.

We cannot give here the host of facts that we have received on the subject, but will say that it seems that not more than four or five pounds of sealed syrup are necessary to keep a proper sized colony during the time they are necessarily in doors, or about four months. We think, but cannot be positive until further experiments, that *one quart* of young bees is better than more to go into winter quarters, and that one pound of food per month will be the average quantity needed. This sealed sugar syrup to be given in clear empty combs when they are put into winter quarters. But, please, do not run any risk of the little chaps starving. If you give them four times what they require, it will not come amiss in spring when they are raising brood. We shall let them use their natural stores until we put them in doors, about November 1st to 15th, according to weather, and then save the balance until they are out again in spring. In regard to pollen, we think, we shall try and give some to each colony, unless it be a few, for experiment, without any at all.

Please report *facts* all you can, or theories supported by facts, and we shall soon have as little fear of dysentery as we now do of moth millers.

Well, as we have now seventy-one colonies, it is going to be quite a task to prepare so many combs of sealed syrup, so listen a minute:

Our tea-kettle feeders will give a colony twenty-five pounds in ten hours, or less; but two difficulties then are here. To get a colony secreting wax, they will have to consume about five of the twenty-five pounds, besides the labor and stickiness of carrying around and making so much syrup.

Our bees are very willing to help whenever they can, as we saw illustrated a few days ago, when some empty sugar barrels were left out

during a light shower; in fact they quite *cheerfully* (maybe a little *vehemently* mixed with it) undertook the pleasant task of taking the saccharine contents of a whole grocery store to their hives, about an eighth of a mile.

Now, we reasoned thus: May not so much energy be a fine thing when properly directed? and, presto! one of our hives, minus cover, was treated with beeswax a la barrels, and a float of strips of pine extemporized; two-and-a-half gallons boiling water poured on fifty pounds coffee sugar, and ten teaspoonfuls cream tartar stirred thoroughly, and then when cold, poured into the waxed hive, which was placed underneath a two-story strong colony, and our part was ended; the seventy pounds of syrup was speedily in the twenty combs, and they are now sealing it up. The colony was allowed to fly as usual, and as no bottom board intervened, they had full scope for their powers. As they are now wax-workers, will not a small amount of syrup keep them so, and cannot more than twenty out of twenty-five pounds of syrup be obtained in the comb?

And if a tight, zinc-lined box, capable of holding three barrels of sugar were given them, would they not use it all before stopping, if empty combs were given them? This we are going to try. We feel quite sure that no boiling is necessary, and that a barrel or some larger vessel may be used, by simply pouring boiling water on the sugar, as before mentioned.

We think one thousand pounds of syrup may be prepared in this way in an hour, and that by simply giving the bee access to it in the manner described, no further labor will be necessary than removing the filled frames, and giving the bees empty ones.

This experiment will give us ample time to experiment more fully with artificial store combs, of which, more anon.

And now, Mr. Editor, we are not half done, if we answer all the queries we have been asked through the Bee Journal. We have also received so many letters saying that our articles would be acceptable still longer, that we must offer them as an excuse. If any one would like us to give more room for others, please be frank, and tell us so.

Mr. Fisher, of Nashville, wishes to know "how soon we expect honey from our basswood orchard." Some in five years; perhaps enough to make it an object in ten years; but we have faith, and trust in Providence for the rest.

"Will not some beekeeper think it a nice neighborhood to locate, also?" A point we well considered at the start. But as we shall increase our bees as forage increases, we shall endeavor to make them think the locality overstocked, even if we have to keep one thousand colonies to hold our own.

May we, by the way, ask Mr. Jasper Hazen one question? In those localities near him that were overstocked some seasons, did those bees die of starvation that had made so many hundred pounds box honey in a season? If so, they certainly did not starve *themselves*; their *greedy owners* starved them.

On the other hand, if they died of starvation, without furnishing any surplus honey at all,

there seems to be a disagreeable feature of his hive and pile of boxes, that he has not mentioned in his report of astonishing yields of box honey.

Will Mr. Hazen tell us more about these colonies dying of starvation because the locality was overstocked.

We never knew a colony to fail getting an ample supply to winter over, when they had room and empty combs.

Mr. C. C. Miller, Marengo, Illinois, writes as follows:

A Word with Novice.

Before it comes time, Mr. Novice, will you give us again explicit directions about feeding bees with sugar syrup? How prepared? How much to a hive? When to feed, &c.? I used last year, old tin fruit cans, punching holes through the lids, and inverting them. Do you think tea-kettles would be any better?

How many bees had you, spring of 1871? how much honey did you take, and how much increase did you have? Same for 1872. If you had watched closely, I think you would have found that your queen worker, mentioned in the June and July numbers, was suffocated by her own bees. I have known that to be the case with poor queens after laying a very few eggs.

I cannot answer your question, how to keep young queens in their cells, but can give you a plan that I found less trouble than the device you used. I took a couple of top bars of frames for the sides of a box without top or bottom, said box being, of course, the length of the frame, and two or three inches wide, and about an inch high, separated into apartments about two inches square. Then for a bottom, I tacked on a piece of wire cloth the entire length, and made a cover for the top of each apartment of square blocks; glass covers would be better. This I placed on my nucleus hive, or perhaps it would do on any hive, but I think not so well on a hive containing a queen. Then within two or three days of their hatching out, I cut out queen cells and put one in each apartment, and as the heat ascended through the wire cloth, they hatched out just as well as if they had not been cut out, and could be kept there a few days, I think, but I am not sure that I allowed any to remain more than a day or two after hatching. By the way, I wish you would try one of my kind of nucleus hives. You would find it very convenient to have a few queens always in laying order, for any emergency, and then when you get through needing any more queens, just slip out the six frames, and put in one hive, and you have a nice little swarm. You can have a patent right for half-price, to be paid for in honey, to be eaten at your house, if ever I come there.

C. C. MILLER.

Marengo, Ill.

To which we answer briefly: If you allow their natural stores to remain in the hive, and they get the dysentery, they will consume, or partially consume twenty-five pounds or more, and perhaps die then. Those colonies that ourselves and others gave sugar syrup alone, seemed about as heavy when taken out in spring as when put in. Get the syrup sealed up in warm weather. We should have it all done in September. The tea-kettle feeder is no better in any respect, only that it is larger, and so requires less time to re-fill.

Sixty-four colonies in spring of 1871, or near

that. No increase to mention. Sold about three thousand five hundred pounds honey.

Spring of 1872, lost three and sold three. Have now seventy-one, so that we have increased about thirteen, and taken about thirty five hundred pounds of honey as last year, and they have nearly enough now to winter, if permitted to have their natural stores.

We afterwards found our queen worker in the hive; she destroyed the cell we introduced, but had long ceased laying, and so we were obliged to "skeese" her after all, which we shall do in future with such, "earlier in life."

The queen we mentioned sometime ago as laying so few eggs during the three years we kept her, and that she had been replaced by what Mr. Price would call a natural queen cell, we promised to report. Well, her royal descendant was just about as good as her mother, and no better, so there is one experiment to show that qualities are inherited.

Mr. Thomas Pierson, Ghent, Ohio, asks, "at what time do you reduce from two to one-story hive? Do you give all the brood to the bees? Where do you keep your combs? and do you smoke them with brimstone? If honey in the combs, do you extract it? How about preserving them, or keeping them from ants, if honey is not extracted?"

We answer all by saying, that we leave combs above until about November 1st, and then remove them, taking as much drone comb as we can, and have no trouble in getting all brood in below. We put the combs and honey, if there be but little, into hives, shutting them up *close*, and have no trouble in keeping them safe until May, without further attention. Our new hive is admirable for this, as it is perfectly tight, and can be piled up in a solid shape, taking but little room when the covers and bottoms are all left off, except one on top and bottom of the whole pile.

As we like to mention everything new in bee-culture that is good, we must say that Gray & Winder's queen cages have given us much satisfaction. We also find their wax extractor very convenient.

In our last, we perhaps made rather too hard a criticism on Adair's Progressive Bee-culture, and think it due him to say, there is much that is good in it; yet we should call it *Un-progressive* Bee-culture, on the whole, and it is so much an advertisement for a patent hive, that it seems it should be furnished gratuitously, as should all books, in our opinion, that are written in the interest of any patented article. Are we queer or peculiar in our ideas? Mr. Adair's articles on Transactions of N. A. Beekeepers' Society, we think much more valuable than Progressive Bee-culture.

Mr. Adair has given us many things that are valuable, and we hope to hear from him often.

We suppose it is well understood, that the simple hive we have described, is as much a Langstroth hive as the usual form, and that it cannot be used by those possessing no right, without infringement.

Mr. L. cautioned us some time ago about recommending such a brief form of a hive until

we had more fully tested them. And we can only add, as we said elsewhere, that after using over a dozen this summer, in every contingency, we challenge the beekeepers of the world to tell us what necessary operation in bee-culture, the simple hive just described does not admit of.

Some one asks about knives. We prefer a very thin, sharp blade, and never use hot water. The point is first slid under the caps, and they are then sliced from the under side, so as to leave the cap in an entire sheet, in its original place, until it comes off all at once. If the knife is *very* thin and sharp, the sheet of caps does not stick to it at all.

Mr. Quinby has recently sent us a knife with a curved point, for uneven combs, but we should prefer to use the straight blade, and slice down the crooked combs until the caps were built nearly level.

Of course, we have the blade bent at the handle, but so thin that a little pressure springs it straight whenever we wish to reach down into a hive to loosen attachments, etc.

To the many kind friends who have written us, that we are unable to answer other than here, we tender our sincere and kindest thanks. We have endeavored to make this article answer as many of your questions as possible, and we would suggest that many, very many of our correspondents could write if they would, much for the Journal that would be of both value and interest. We know our editor would be pleased to hear from you all, and it *may be*, that after this, he will be pleased to hear a little less from your old friend

NOVICE.

[Translated from the *Blensenzeitung*.]

The Theory of Wintering.

It is well known that each living organism, if it will exist in a healthy condition, must live in a known temperature. The narrower these limits are drawn, the less developed and self-sustaining will be the life of the organism, or in other words, the smaller will be the centre of the nervous system.

While man, whose nervous system stands highest in development, and who has the most fully developed brain of all the creatures of the earth, is not only able to live in all degrees of latitude, but also able to endure a variation of temperature of 105° R.; while most insects being brainless, and especially bees, can hardly endure a variation of 40° R., as they die from cold at 6° R., and from heat at 46° R.

Thus the first winter that would pass over our Temperate Zone would destroy almost all the insects, had not providence provided for their preservation. There are four methods of preservation: 1st. In the egg; 2d. In the larva, to which belong all those insects requiring two or more years for their development; 3d. In the chrysalis; 4th. The developed insect. The most of those belonging to this latter class pass the winter in a state of torpidity.

To this latter class belong the bees, and it is well known that these, in order that their de-

pressed vitality may not be wholly extinguished, require for their successful wintering, besides the necessary food and rest, especially a protected dwelling. The successful wintering of his bees is a masterwork of the beekeeper, as through ignorance of an inviolable, universal and authentic law, he will be very liable to commit many mistakes.

Let us see whether from the known discoveries and practical advancements to a successful wintering of the bees, a universal law cannot be developed.

In our climate bees need for successful wintering: 1. A properly constructed hive; 2. Healthy and sufficient food in its proper place; 3. Strong stock; 4. An undisturbed rest. The last three conditions are admitted on all hands. Every one knows that they are unalterable and what is necessary to fulfil them. What is a proper winter dwelling, is alone a subject of thought and dispute. With this we have alone to do.

A proper winter dwelling for bees needs two requisites; that it be neither too cold nor too warm. It is too cold: 1st. When the hive is too large for the quantity of bees to be wintered in it, the animal heat developed from the bees being diffused over too large a space; 2d. When the hive contains cracks or openings, so that the outside cold air would have free passage through the hive. By actual experiment, it has been found that bees become torpid when placed for any length of time in an atmosphere of 6° R.; that even continuous 8° R. will be injurious; hence, when in winter quarters, and without brood, if they are to be kept successfully, they must be in a temperature of 10° R. This temperature is found in every properly wintered stock, by actual observations with the thermometer, of course, not in the immediate vicinity of the brood, nor in unoccupied space of the hive, but on the outer circle of the cluster of bees. Is the hive from any of the above-mentioned reasons too cold, each descending degree of temperature will render the revival of the bees from their torpidity more difficult. The stock will eventually die. A swarm is able to exist in a temperature of 28° R., unless it is much disturbed or has a large quantity of brood.

A swarm, therefore, in order to be destroyed, must be awakened fully—a condition which would not nominally happen in winter. All the heat of the hive is developed from the bees themselves. The development of heat is labor, and a kind of labor which largely consumes vigor of the bees, especially when owing to the defective construction of the hive, the heat, through radiation, is lost. Therefore, a stock can for a short period endure intense cold, but is frozen by a relative low temperature, in which it is placed for weeks or months. It dies from exhaustion. In more favorable circumstances, when the hive is in a position to protect itself from the cold, it may suffer from an attack of dysentery. To produce warmth, the bees must consume a great quantity of heat producing material, i. e., honey, whereby the intestines are so filled that they are no longer able to contain the feces. The hive should, therefore, be so constructed that the bees, during their period of

torpidity and when without brood, are able to obtain and sustain a warmth of 10° R. Should the hive not be able to afford the desired protection, it must be removed to a dark protected place, or protected from the cold by wrappings of some material. For such purposes a covering made of straw or wood affords the best protection. Through the inordinate covering with straw, the advantage may be overdone.

The hive dare not be too warm. Hives that are too warm are as injurious for wintering bees in, as when too cold. They are the product of the last twenty years, and their destructiveness is as yet not fully known. So long as logs, straw hives and single Dzierzon* hives were used, this charge was unknown. It was only when beekeepers began to keep bees in a cupboard-like hives, and in pavilions, and for the better retention of warmth, closely wrapping these and single hives with covering, that this trouble made its appearance.

We have no desire to do Baron von Berlepsch wrong, when we attribute to him the origin and dissemination of these too warm dwellings. He invented the pavilion, in which each single hive, where it comes in contact with the outside air, is well protected; he first taught the building of double walls; he narrowed the space occupied by the bees to the smallest possible space, by removing the outside frames, and sub-

* The hives alluded to in this article are the Dzierzon and Berlepsch hives, and as many of our readers may have some difficulty in understanding the various allusions, we append herewith a description of the two hives, taken from the BEE JOURNAL, Vol. 1, pp. 14, 15: "The Dzierzon hive, in its original form, was a simple oblong box, thirty inches long, nine inches broad, and fifteen inches high, the ends being movable, buttoned doors. Two corresponding grooves were cut in the inner sides, half an inch from the top, on which were placed, at intervals of a half inch apart, a series of cross bars or slats fitted up with empty pieces of comb as guides for the bees. The entrance was on one of the sides, midway of its length, and one inch from the bottom. In building or extending the combs the bees attach them to the sides of the hive. These attachments have to be severed when the bars and combs are to be taken out. As the ends of the bars are confined by, and can only slide in, the grooves, the combs must be taken out consecutively, and an interior comb can be reached only by removing all the anterior ones. With his hives substantially thus constructed, though with various modifications, that celebrated apiarian made all his observations.

By a more recent modification or the introduction of what he calls *double* or *twain* hives, effects a saving of material, facilitates the multiplication of colonies, and secures his bees greater protection against the severity of the winter.

One of the defects of the Dzierzon hive—the impossibility of removing the combs without severing the side attachment—was so obvious, that a remedy was early sought, and in 1855, the Baron of Berlepsch adopted frames similar in principle, though slightly differing in construction from those of the Langstroth hive. These enabled him to remove the combs without cutting and with ease. But his frames are troublesome to make and costly besides—two objections which operate against their introduction into use."

stituting therefor straw mats; he sealed hermetically every crack, and stopped every opening for the escape of heat, and then imagines he has the bees in their native tropical climate, seated in Abraham's bosom. But they are sitting in hell, and are suffering torment like the rich man. Every one who has wintered his bees in too warm hives, has found this to his own satisfaction, long before they discovered the true cause of the wholesale slaughter of their bees. So soon as the temperature outside the hive sinks to below 8° R., and the bees are prevented from leaving the hive, they must remain in the hive, and fall into the known winter torpor. The opposite condition is, when existing for any length of time, contrary to nature. Their activity ceases at 10° R.; at 12° R. their full activity develops itself, and it is with the greatest difficulty that they are kept within the hives.

Is their dwelling too warm, either being built as regards the bees, too narrow, or the walls of the hive are too thick, so preventing as well the escape of the warmth within the hive as the introduction of fresh air from the outside, and thus also preventing the torpor of the bees, and a heat of a higher temperature than 10° R. will be produced.

Should this state continue for any length of time, the bees will become inquiet. I refer to the temperature of the outer periphery of the winter cluster, and to the brood which can readily endure a heat of 28° R. without injury, because as brood there is no necessity for their flying out. A large number of the bees will leave their place in the winter cluster, and crawl to the entrance of the hive in the hope of enjoying an airing. The low temperature outside forbids this. The bees return again and become more and more restless. At last they become so heated by the constantly increasing temperature of the interior, that they begin to buzz and fan. I have found stocks in such condition, that when I opened the outer door, the bees were seen running wildly over the inner glass door, which was warm to the touch.

That like circumstances occur, no one will deny, since there has been much complaint in regard to it; only it is not clearly known, or perhaps not known at all, that too much heat is the cause of all this. Yet one can readily convince himself. Take a strong, entirely healthy swarm, wintering in a normal condition, and place it in a light chamber of 6° R. temperature, and in a few days the same condition will be discovered, as exists for weeks and months in an over heated hive.

Does this too great heat continue for any length of time, it naturally produces great thirst, since in the heated dwelling with their thick walls, the precipitation of moisture is either wholly prevented, or first appears on the sides and at the entrance, from which the water may be seen flowing. It is a certain sign that not Dzierzon, from whom nothing relative to bee-culture readily escapes, but Berlepsch, the master builder of too warm dwellings, has awakened the desire of thirst. From many and various experiments and discoveries, I have

discovered that a too warm dwelling develops thirst.

This is not a real disease of the bees, only a symptom of sickness—of the overheating of the bees and analogous to the thirst developed by fever.*

This desire for thirst must be allayed in time by suitable drinks, or the last stage will soon be reached, and here dysentery will bring the bees to the borders of destruction. It is best not to let the bees reach this state of thirst before using preventives; the hive should be cooled at the proper time, either by opening the door or through the introduction of fresh air through the Molitor, Muhlfeld plan, by placing icicles in the entrance or something of that manner; but the best plan for wintering naturally is, from the beginning, to prevent overheating. If the beekeeper has very warm hives, which he does not desire to dispense with, let him, above all things, forbear filling up the honey room with any badly conducting material; the placing of straw mats inside of the door, the narrowing of the entrance, etc. In pavilions, during warm winter days as well as nights, let the door of the pavilion open.

From these thus developed theories a general law may be made for the successful wintering of bees. *Bees should be so wintered that around the periphery of the winter cluster a temperature of 10° R. could be easily maintained.*

Owing to the great difference in hives, and the changes in the outer temperature, experience alone will teach how advantageously to follow the rule. Those will winter their bees with the greatest safety who are in the position to bury their bees, because in the earth there will be an equal temperature maintained as well in cold as in warm weather; and even when warm weather appears, the darkness which surrounds the bees will prevent them from becoming restless.

SCHONFELD.

Teutschel, Dec. 8, 1871.

Remarks on the above Article by Dzierzon.

Herr Schonfeld develops in No. 1 of the *Bienenzeitung*, excellent theoretical principles relative to wintering bees, nevertheless, I cannot entirely consent to its practical application, namely; when he says that bee hives should not be made too warm.

I find that portion contradicted by his own words, that the bees require a certain temperature which upon the surface of the cluster dare not sink below 10° R.; that the warmth of the hive is developed from the bees; that with the greatest cold they are able to develop the required heat; that they can by degrees destroy themselves, should they make too great exertions and have to continue them for too long a

*Notwithstanding it is especially useful to provide drink, especially in cold hives, towards the end of winter, which appears from my drinking glasses, which the bees not in any wise disturb until the brood demands water, and the bees are thus prevented from an injurious flight in search of water.

time. According to these principles, that hive is best, which as far as possible prevents the escape of heat. Any one would just as soon complain of a room being too comfortable, as to complain of a bee hive being too warm, or more properly, retaining too much heat; in that the sides themselves develop no heat, but only retain that arising from the bees and preventing it from being lost by radiation. The bees will never develop more heat than is needed, and if, owing to the casual stopping of the entrance, or some other disturbance, the bees should raise the temperature of the hive to the highest degree, they will drive out the surplus heat by ventilation, and in a short time resume their natural quiet.

A bee hive may be too contracted for a very large swarm when it is too small in itself or contains too much honey. Since one is not able to foresee the amount of room that will be occupied by honey and combs, it may readily happen that the need of necessary air—that indispensable element of life—will appear, and unrest and its consequent evils, especially dysentery, will be brought on. The discussion can clearly not be concerning the too great and injurious heat retaining qualities of the bee hive. In the thickest and warmest logs, according to actual observation, bees winter best. Such hives are dangerous in the summer rather than in the winter. While, especially if they are rounded or four sided, will the temperature be equal throughout the hive, and hence the brood be spread throughout the hive in all directions, and especially drone brood in large quantities, so that the possessor of these stocks will, in autumn, have to be satisfied with many empty combs, unless the honey harvest be unusually favorable, whereas in spring they promised most profit from rational management, viz.: the confinement of the brood space, especially drone brood, the arrangement of a particular honey space or magazine, and the transfer of a large portion of the population of the hive by means of artificial swarming, &c.

One can readily see how advantageous the bees may be wintered when the walls of their hive, not only do not obstruct heat, but rather bring in heat; thus in hives containing several swarms they gladly place their winter quarter against the common partition, and in hives containing three swarms, a very weak swarm will winter exceedingly well in the centre division.

At all events, such bee hives are very dry, and the bees must not be left without water, especially if they have candied honey or pure candy for their winter food. With ordinary fluid honey they will remain perfectly quiet until the commencement of brood rearing. A little thirst will work no injury, but, on the contrary, it has the advantage to prevent the bees from beginning the rearing of brood too early. That bees should so suffer from thirst, that they will drink eagerly every drop of water, bustle about and make a noise, has never been an observation of mine; they conduct themselves more like bees suffering from hunger. Individual ones may fly out, or crawl around the hive like ants, seeking to drink any water they may find, but the great

mass of the bees will remain in perfect quiet. The warmer the hive is the less will the bees be affected by any change of temperature, and therefore it will keep the bees in the greatest degree of rest.

How Herr Schonfeld can maintain the direct opposite as the consequences of the warmth-retaining qualities of the hive, and can declare that the bees will become restless when too warm, I am unable to comprehend. Let the temperature within the hive, and outside be what it will, and vary from 20° to 30° R., the bees will show signs of wakefulness and remain quiet, should they have nothing outside to fetch. This is seen late in summer and in autumn, and is also seen in the tropics during the hot summers, which answer to our winters. Sometimes the bees make a start for purification, but soon return and resume their normal state; in the hive they naturally do not gather themselves in a cluster, but spread themselves over the combs. Their rest and idleness is, however, the same as that which we see in our bees in autumn and winter. Individual bees will, of course, be seen flying about as scouts, and only when they bring the intelligence that there is something to be made, will the majority take to the wing.

I can attribute this disturbance of the bees, not as Herr Schonfeld, to the overheated condition of the hive, but to a lack of air, or confinement, though it might be the consequence of queenless or some accidental disturbance from the outside. In a tightly and well built hive, with perhaps double doors, especially when placed in a close room, may the bees suffer from a want of air. The carbonic acid gas, being heavier than air, gradually flows off; but as the much heavier water will not flow readily from the spigot when the bung-hole is hermetically sealed, so in the bee hive, the oxygen may be so consumed, that the carbonic acid gas will rise, and the bees become very uneasy and anxious. Besides, when the entrance is closed by perforated bar, the population of the hive may soon be in the greatest agitation. The bees buzz around and bite the door, without one showing itself at the entrance. The bees appear to have conducted themselves thus on the occasion described by Herr Schonfeld. When the bees rush against the glass door, they desire to get out into the open air, and should they not appear at the entrance, the reason is that it is inaccessible. If the bees are not to destroy themselves, through anxious and fruitless efforts to escape from the hive, help must be extended to them without loss of time. In favorable weather the entrance to the hive should be opened, and if possible, be opened early, so that the entrance may be readily seen. In cold weather the bees may be brought in a warm room. If neither the one nor the other is possible, then the openings around the entrance through which the bees may escape, are tightly closed, and a more favorable season awaited for performing further operations. The chief aim of the operation is that the bees be so moved that they are placed near the entrance of the hive. It is of no use to attempt to drive them away with smoke alone, they will return to pro-

tact the combs now containing, or which have heretofore contained, brood.

The combs upon which the bees cluster should be removed in the hive to a position near the entrance; and should the combs be rather broad, that end on which the bees cluster thickest should be placed towards the entrance. Should the edges of the combs be somewhat distant from the walls of the hive, it would be well to put a small strip of comb between the comb and the wall of the hive, so as to form a bridge between the entrance and the comb, thereby giving a ready means of access to the comb. Many stocks have neglected a favorable time for the purification flight, and lost many bees, which, half benumbed, are able to reach the entrance of the hive, and die in the hive, the way to the entrance being long and much obstructed. I think it doubtful therefore whether it is judicious in box hives to put the entrance at the bottom of the hive. When the boxes are high, two entrances are advantageous; the one at the bottom and the other about half the height of the brood. And these entrances can be closed, or partly closed, according as may be required by the strength of the swarm and the position of the bees in winter and when rearing brood. To leave the openings both open in winter will be beneficial to strong stocks. The air can thus pass in at one entrance and out at the other, and will thus be constantly renewed without any aid from the bees, so that strong stocks, which carefully guard the entrance, will pass safely through the winter. How quickly, especially with weak stocks, a want of air will show itself, I discovered through actual experiment in this manner. I wintered for the purpose of having reserve queens, and also for the purpose of making observations, small swarms in small boxes, and sometimes transferred strong swarms after they had suffered from cold, in like boxes, and placed them in a room. To protect them from the light, I placed some in a clothes closet and some in larger boxes. Whenever I opened them the bees began to buzz, so that I began to suspect the loss of the queen. As this fear of mine proved false, there was no other explanation to be given, than that the bees were lacking fresh air, since the air contained in the large chest was not sufficient to renew the air in the hive.

Now every room, every cellar, and every enclosed room is but a box, larger, of course, in size, and the stocks placed therein may, even though the entrance be wide open, more easily suffer from want of air, than when the stock is upon its summer stand.

Strong swarms in box hives may have the doors raised, or removed entirely, and straw mats substituted. In Stebnik's the cylindrical formed hives are placed on their side, with the one end open, and the bees winter in it advantageously. I write this on these conditions, that the earth will absorb the carbonic acid gas, and thus purify the air. The degree of moisture in the air also plays a very important part in this matter. It will never be any injury to fill a pure white comb, having no appearance of mould, with water, and place it in the hive

either horizontally or perpendicularly. Even though the bees do not touch it, it will still produce moisture, and thus aid to produce healthfulness among the bees. DZIERZON.

Carismarkt, February, 1873.

How Petitions are Manufactured.

At the request of several subscribers we insert the following letter, addressed to the editors of the Beekeepers' Journal, showing how petitions were manufactured this spring to defeat the supposed application of Mr. Langstroth from an extension of his patent.

Nashville, Tenn., 1872.

EDITORS OF BEEKEEPER'S JOURNAL:—In the April number of the Journal, over the signature of reporter, I noticed an article headed "The Tennessee Apiarian Society," about which I desire with your permission to say a word, and to make a few corrections in regard to the remonstrance mentioned there.

Now, whether those who presented the remonstrance were mistaken in regard to the facts concerning the extension, or whether they were governed by selfish motives, I leave for themselves to say. But it looks a little suspicious, when I inform you that at the meeting referred to by the reporter, there were but seven members present, five of whom signed the remonstrance. Of these five, four are inventors or improvers of hives or frames in which all the main principles of the Langstroth hive are included accidentally we presume; and the fifth, the Secretary of the Association, signed under a misapprehension of the facts, and has since renounced the whole scheme and will sign for extension. So much "for all the members but one and the president," signing the remonstrance.

Now, Messrs. Editors, I shall leave it to you and your readers to say, whether these *inventors* and improvers of the Langstroth principles were governed by disinterested or selfish motives in signing the remonstrance against the extension of the Langstroth patent, when it stands directly in the way of the manufacturing use and sale of their *own* hives, which they can neither use nor sell, on account of Mr. Langstroth happening to have invented the same principles fifteen or twenty years ahead of them.

But let us look at the arguments in favor of the remonstrants:

1st. Inasmuch as Mr. L. had not realized what he ought to from his patent, therefore he never would, consequently an extension would be of no benefit to Mr. L.

2d. That there was no assurance that those who had purchased a right to use the Langstroth hive, would not be compelled to do so again.

3d. That this (Langstroth) hive was the greatest incubus on bee-culture.

In regard to the first argument, let us say, that if the remonstrants consider this argument conclusive, we think they deserve the pity of every sensible man. In regard to the second, would it not have been more creditable for these remonstrants to have informed themselves on the rules

governing the extension of patents, than to have made such a splendid display of their ignorance, as to insist that those who had purchased the right to use, would have to do it again, when the fact is an extension does not effect the right of a previous purchaser to use. But as has been said, "When ignorance is bliss, 'tis folly to be wise."

The third argument advanced was said to have been explained by Mr. Owen, when called upon, in the following language: "Let any one attempt an improvement in bee hives and he is immediately set upon by the Langstroth faction as an infringer, and threatened with a law suit, and if any one wants a hive, and uses any other than the Langstroth, he is told that he must incur the additional expense of a Langstroth right, or lay himself liable to a legal prosecution; and he for one would be glad when this black mailing system was at an end and the inventive genius of American beekeepers would be untrammelled."

We think that Mr. Owens' language will fully reveal the spirit that governed the signers of the remonstrance. Now the trouble with this "inventive genius" class of beekeepers is, that they are not allowed to appropriate all of the important principles of the Langstroth patent to their own use, by attaching them to some peculiar shaped hive and then call it an improved hive, or give it some hideous name, and then pass it off on uninformed persons as their own invention; and because they are not allowed to appropriate with impunity, they consider themselves blackmailed and their "inventive genius" trammelled. Now we hope when the remonstrants learn that Mr. Langstroth has not even made an application for an extension, they will still consider their "inventive genius untrammelled," only so far as falsehood and misrepresentation are concerned.

REPORTER No. 2.

[For the American Bee Journal.]

The Miller and his Wife in Trouble.

KIND EDITOR:—I have some items which I will part with to our bee brothers, and at the same time ask others whether they too meet trouble almost daily, or whether things all go smooth and right with them? Well, I will take my text in the word trouble, commencing with

TROUBLE No. 1. There is something wrong at the house, says my brother miller. Look! your wife is knocking and pulling her hair at a fearful rate some fifty yards from the house, and your daughter with the babe is also taking steps for some safe place. Soon word came to the mill, to come and take care of the bees, they have run us all out of the house. I was soon at the field of battle and found my orders had been disobeyed. I had been extracting honey the evening before, and told my son to put the empty combs and frames into empty hives, closing them up tight.

He thinks it will do as well to put them up stairs, so up they went; but the bees soon found

their way to them, and in a very short time, the house and yard were filled with bees, and from some cause became angry and went for 'em.

I removed the combs and the first trouble ceased.

TROUBLE No. 2. George and myself almost out-generaled.

As we have no particular house for our extractor, we pressed the old smoke house into service, closing the door and working by candle light, there being no windows in the smoke-house. But there was soon trouble on hands, the bees found some cracks and holes and in they came. This would not do, so we got paper and paste and papered our house, but still they came in under the shingles, &c., so we packed up our matters and left for the kitchen. There all went right when honey was very plenty, but when it got scarce they again found us out, coming in at places where we would not have believed they would. The floor was full; my better half stepped on one, but did not stay long with her foot on him. That was too much: "get out with your honey-slinger" was the orders, and as we always obey orders in the kitchen, for we are very much afraid of dish rags and broom sticks, we got out. But where shall we go? The smoke house was the only place we could think of, so more paper and paste was added.

TROUBLE No. 3 comes next. Our dear old friend Langstroth says in his book, page 308, "the gentleness of bees when properly managed makes them wonderfully subject to human control." This is very true as we all will acknowledge, but they appear to have such a love for honey that they cannot control their appetites, for they will break that commandment: "Thou shalt not steal." Some days I can hardly open a hive, for they follow me from hive to hive, so that I have to give it up for that day; they appear to know me and watch where I am going to open the next hive. As soon as it is open, they go on the old Dutch rule: "Every one help himself." I would rather they would wait until it is handed round. I think I love my bees as much as any man, but I am tempted sometimes to knock a chap down that wants to salute me with a kiss of charity. Sometimes they appear to have great respect for me, calling cousin and aunt in my ears. I think in the evening when honey is scarce is about as good a time as any to open a hive. But how Catharine Grimm managed to get one or two barrels out in a day, without having the bees after her, trying to rob, I can't see; perhaps she could tell me. I find they have not yet adopted the eight hour system, as they are on the look out late in the evening. When honey is very plenty, I know they are not quite so troublesome, but mine trouble me even then; who can give the time and plan to prevent this? Let us hear.

TROUBLE No. 4. For the last two weeks bees are again dragged out of the hive on account of the pollen of the milk-weed hanging to their legs. In October No., 1871, p. 87, of A. B. J., I thought it was false growth or natural deformity, but I have learned better since. See Quinby's book on bee-keeping, p. 82, where it is fully described. The American Agriculturist of New

York, has a picture of a silk or milk-weed flower, also a bee magnified with the pollen of the milk-weed adhering to his legs, which is worth examining. There is an article in the Cincinnati Times, No. 33, July 25th, 1872, stating that two apiarists of Utah deny it to be the pollen of the milk-weed, and recommend us not to destroy the weed. They say they have found it on the legs of young bee that have never left the hive. This can all be, and yet the milk-weed pollen be the cause of the trouble. My bees work lots of it off their legs during the night, which if a young bee comes in contact with, will also cling to its legs. I have caught some bees which others were dragging out of the hive, and took a pin and cleaned their legs of the pollen, then let them in, and they were unmolested. Mr. Editor, enclosed please find some of the pollen of the silk or milk-weed that my bees have worked off their legs and thrown out; perhaps it is old to you; if so cast it away without a look.

TROUBLE No. 5. My honey plant spoken of in the A. B. J., of October, 1871, p. 87, played off on me this year, or I was mistaken last year about its blooming early. I wrote my article August 10th, 1871, and said it was in bloom long ago. This year I watched it closely, and it only commenced blooming about the 1st of August. Last year was an earlier spring and harvest, which may account for its being also earlier. It is therefore rather late to fit in between spring and fall pasturage.

TROUBLE No. 6. I can't come within ten feet of Gallup and Hosmer. I have Langstroth and Gallup hives, weigh them every evening on as true a scale as can be bought. During clover and bass wood, the highest I ever received was eight pounds. Quinby says, p. 84, $8\frac{1}{2}$ pounds is the greatest weight he has ever had, but I suppose Quinby did not extract at the time he wrote his book, he can no doubt do better now with the extractor. I did perhaps not extract as often as I should have done. Next year, if I live and keep my health, and my bees live and keep their health, I intend to extract one hive very close, but keeping them strong, and test the truth of some of those large yields of honey. To my mind, at least, bees will work as much for me as any other person. Bee-pasturage will make some difference in different localities. I am aware of this, but I have white clover, linden or basswood, cherry, peach, apple, raspberry, golden rod, and lots of other fall flowers, the names of which are unknown to me. Swarming was very scarce with us this year. I had one on the 15th of July. Reuben Hale, my neighbor, had one on the 27th. William Markle had three. I do not consider this an excellent year. Cold and late spring, wet summer, with cold nights, is in my opinion not so good for bees, yet I cannot complain of it being a poor season. Good will to the Editor and all his readers.

A MILLER BUT NOT A MOTH MILLER.
Duncan's Mills, Fulton Co., Ill., Aug., 1872.

Italian bees are not so much disposed to rob, or so liable to be robbed as black bees.

[For the American Bee Journal.]

The Song of the Queen.

It is a long time since it was discovered that a queen could sing. Many of the readers of the A. B. J., have heard the song of the young queen the night before swarming. It is generally believed that when the young queen is hatched, the workers prevent her from emerging from off the cell until the departure of the old queen, and that she shows her impatience by this plaintive song.

This is not always the case, for I have actually seen a queen out of the cell in the act of singing. It happened in this wise. I was opening a pure Italian stock, that had swarmed on the day preceding, for the purpose of removing the capped queen cells which the hive might contain. I found in one of the frames a queen cell, from which a queen had just hatched, and almost at the same instant, I heard the song of a queen on the frame that I was holding. I turned the frame over and over several times, but in vain. All at once the song began again, and I caught the queen in the act.

She was standing on the comb, perfectly still. When singing her abdomen was slightly distended. What was the cause of her complaint I am unable to tell; and after stating the fact I will retire and let others explain.

The season here has been very poor. Harvest lasted only from the 18th to 30th of June. Extra stocks harvested from 50 to 70 lbs. box honey. Average 15 lbs. per colony.

My father started for Italy, on July 9th. He will be back by the 10th of September with more queens than have ever been imported into this country before. Indeed American Bee keepers must be very foolish to spend so much money for such a humbug as the Italian bee. What do you think of it, MR. NATIVE?

C. P. DADANT.

Hamilton, Ill., July 12, 1872.

When the queen-bee is forcibly taken away from the hive, the bees which are near her at the time do not appear sensible of her absence, and the labors of the hive are carried on as usual for a time. It is seldom before the lapse of an hour that the working-bees begin to manifest any symptoms of uneasiness. They are then observed to quit the larvæ which they had been feeding, and to run about in great agitation to and fro; and on meeting with such of their companions as are not yet aware of the disaster which has befallen them, communicate the intelligence by crossing their antennæ and striking lightly with them. The bees which receive the news, become in their turn agitated, and spread the alarm further. All the inhabitants now rush forward, eagerly seeking their lost queen. But finding search useless, they appear to become resigned to their misfortune, the tumult subsides, and if there are worker eggs or young larvæ in the cells, preparations are made to supply the loss by raising a new queen, and the usual labors of the hive are resumed.

[For the American Bee Journal.]

Mortality of Bees in Illinois.

There has been great destruction among bees in this country. Hundreds of beekeepers have lost from one-half to all they had during last winter and spring. Full seven-eighths of the number that went into winter quarters have perished and have generally left plenty of honey. I am quite satisfied that this wholesale destruction was mostly from bad management, or rather from no management at all.

I will give my experience in preparing for the winter. I gave a brief account of our honey season of 1871, in A. B. J., vol. 7, p. 135. It was in the forepart of September that I found the crisis was coming, for the honey drouth of July and August was so severe, that the bees were consuming more honey than they were gathering, and that the queens had nearly ceased laying. Early in September, I found they were gathering honey very fast from Smart weed (*Polygonum Hydropiper* L.), and were filling the brood cells, leaving but small spaces for queens to lay their eggs in. I concluded at once that if permitted to go on thus, I would soon run out of bees. Having previously obtained a Hru-chka from the National Bee Hive Company, of St. Charles, Illinois, I commenced extracting the honey out of the chamber, and supplying the upper chamber with empty combs, and I use the two-story Lungstroth hive. This soon gave the queens room for laying, of which they soon availed themselves, keeping the stocks up to full standard. By this means they were fully prepared for winter both in bees and honey. When the time came to fix them up for wintering, I prepared them as I stated in my former letter, and they came through all right, in the spring without the loss of a swarm. Since I have adopted wintering them on their summer stand with proper protection, they have not been troubled with dysentery.

This season has been very dry, and the honey producing plants have yielded but little nectar. If the fall pasturage does not prove abundant, like last year, we will have to feed our bees for next winter.

I would like to have correspondents give the name of their county, as well as their State and post office. I would be glad if every beekeeper passing this way would give me a call. My fare, though humble, is always free to such. If they cannot learn something maybe I can. Send on the Bee Journal. We are never too weary to read it.

H. W. WIXOM.

Mendo'a, La Salle Co., Ill., July 20, 1872.

[For the American Bee Journal.]

Imprudence of Beeking.

In the July number of the BEE JOURNAL, is an article with the above caption (which by the way, should have been headed Imprudence of beekeepers), which contains some right and some wrong. As a general rule only successes are

reported, and every year many poor victims dazzled by the idea of clearing \$40 or \$50 per swarm, go into the business only to be disgusted with it. The harm done is not to the beekeepers but to the victims. Let both be fairly reported, let them have some idea of the amount of sweating they will have to do in handling bees in hot days, of the number of stings to be endured even from "amiable" Italians; of the number of disappointments and vexations when the bees will do just the reverse of what is desired or expected, and then let them know that if they fight through all this, read good books and papers, and *learn the trade*, there is honey for them. I have no interest in keeping bees, only pleasure and honey. I have neither bees, hives, nor queens to sell, but so long as millions of dollars worth of honey goes to waste ever year, for want of bees to gather it, we should be large hearted enough to desire the greatest good to the greatest number.

But is it true that we shall suffer by having new comers in the field? Is there less money to be made in honey now than when less were gathering it? Compare the price of honey in the comb in different sections with the price ten or twenty years ago. Years ago the same cry was raised about fruit, "the market will be overstocked and it will bring nothing." To-day I cannot buy any fruit for less than three or four times the price I could when a boy, in the same place. I want enough intelligent beekeepers to come into the field, so that a regular market may be established not subject to great fluctuations; so that a staple article, found on the table of the poor as well as the rich, not only when company comes, but as a regular article of diet.

C. C. MILLER.

Marengo, Ill.

[For the American Bee Journal.]

See Notes from Morrison, Ill.

Mr. EDITOR:—In the May number of your Journal, "B" heads an article "Dronings," and takes out a patent on the caption, but gives his readers no specifications or limits; now I wish to find a little fault, or rather make a suggestion to the Editor of the Journal—that to beekeepers a most valuable requisite would be a department of "hints." * * * *

The spring has been cold and backward—business among the bees has made but slow progress with what few we have left—a great disaster having befallen beekeepers in this region and left many yards empty of their joyous workers—where last season stood many hives of industry, can now be seen standing or lying around the monuments of departed sweetness; many apiaries are gone entirely.

Of 35 good stocks last fall, I came out this spring with two, one in a box and one in a frame hive. One of my neighbors lost 50, all he had. A man near me that does not believe in the science of bee-culture, and does nothing but let his bees alone, only lost one out of nine, all in old box hives, and black bees, and standing out

in as bleak a place as can be found in the country. The dread disease, dysentery, has taken our workers. Here comes in another wish that we had known of Novice's idea or knowledge of feeding sugar syrup in the fall. Here is where a "hint" would have been very valuable.

Now a suggestion. Mr. Duffield, on page 262, vol. 7, says: "If all the hives had the same size frames, &c., it would do an immense good. When can the beekeepers of the country have a better time to get uniformity in the size of frames than now? I for one am in favor of it, and am willing to adopt some standard, so that we can the quicker repair the damages should disaster again come upon us. What say you beekeepers, shall we do it?"

Another suggestion: It is pleasant to read reports and doings from different ones as to seasons and prospects, results, &c., and one likes to read understandingly as to latitude and longitude, and when one reads an interesting item or article that has reference to bees, it is very unpleasant (to me) to have the writer's name only, or name, town and State; it is sometimes very agreeable to know the *part* of the State, all towns and post offices are not on the maps, but the counties* are, and so give us the counties and date in all articles, that we can form a better judgment and better comparison with our own localities. * * * *

Novice, in the June number of the American Bee Journal, asks his western friends a question, if the bees died with the disease *after* they begun to fly in the spring.

Now I can answer from the book. In the last week in February, we had warm, pleasant weather, and for some few days in the first of March bees flew splendidly. I had then nineteen stocks. I put out rye flour, and they carried in some. I began to feel happy in my sorrow, to think I had some capital left upon which to begin business again, but I was joyous too soon. We soon had a cold, wet and freezing time, that made everything tight, and my little pets began "passing away," some days one swarm, other days two or more, until I only had but two remaining. I lost the last on the 8d of April—my last Italian swarm, sorry I was, indeed, then. I looked among the dead and found the royal bird, and with an unpleasant sensation I spiked her with a pin, and have her now in my case. One favor from you, Mr. Editor—give us the Journal twice a month during the summer at least. We will pay you for it. That every subscriber may meet with success with his bees this season, is the earnest wish of

F. W. CHAPMAN.

Morrison, Whiteside Co., Ill., June 11, 1872.

* We thought we were over liberal in giving, whenever possible, the name of every contributor and his address; but it seems from this and another writer in this month's Journal, that we have committed the sin of omission. Well, we shall try to amend. Our practice is contrary to that of nearly all other papers who give the county, but carefully conceal the residence of the writer—dreading that their subscribers and contributors may be enticed away by competing journals, a fear which we never entertained, and which experience has taught to be groundless.—Ed.

[For the American Bee Journal.]

Things of Real Merit.

The R. R. Murphy improved extractor, is hard to beat, not breaking or cracking the tenderest combs. In fact it is about as near a perfect machine as can be. Next is the new honey knife of J. L. Peabody, very thin, concave in shape on the one side, and of course convex on the other. This you will readily see allows a very thin blade and still prevents springing. It works the best of any one yet seen in that line. Mr. Peabody has only sent out a few on trial, and has none for sale this season. Next is Mr. Adair's bee-feeder. For cheapness and efficiency it is just the very best thing in that line I have ever seen. Two of those fitted into my nuclei hives feed four nuclei, and the cost is not over 2 or 3 cents each, and they take up no room in the hive, as they are fitted into divisions between the two nuclei. Now, Mr. Editor, I am not bribed to give those things a puff, but beekeepers are inquiring after them privately, and I prefer to answer them publicly. I have Mr. Adair's new idea hive on trial, and shall report as soon as convenient, just what I think of it, even if some of my friends should get into spasms. I also built three hives of the same form, containing my own combs, and have them on trial.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

FROM NORTHWESTERN OHIO.

A Visit to Dr. Sanford's Apiary.

Wearied with professional duties, and tired of confinement to the office, under the sweltering heat of the first week in July, with the thermometer at 98° in the shade, I resolved to take a stroll by way of recreation, into the suburbs of our pleasant village (having a population now sufficient to claim city honors). After a half hour's walk, I found myself at the apiary of Dr. S. Sanford, which is situated on the east bank of the Ottawa river, and just without the city limits. The apiary is located on ground gently sloping to the eastward, and protected from the west winds by the bluff at the river's edge; making a delightful situation for an apiary. My natural love for bees, together with the interest always awakened by having the care and management of the "little pets," impelled me to make a tour in the apiary. I found the doctor among his bees, and after a short time, within which to rest and cool off, he kindly showed me through his apiary, and as it may be interesting to some of your readers, I will give a brief detail of what I saw and learned there of his mode of keeping bees.

The doctor put into winter quarters eighty-three colonies, of which number about fifty

came out in first rate order ; thirty or thirty-one were in bad condition, being weak in numbers and in stores, having suffered from the "dysentery," and two were dead. His loss was very small, compared with that of the beekeepers generally in this section of the country, as most lost from fifty to one hundred per cent. of the number they had last fall. Those that were weak, he stimulated by early and constant feeding, until there was forage for them to gather, and at the date of my visit there was not a single hive which did not seem crowded with bees and rich with stores ; excepting those only, from which he had very recently extracted the honey, and they were rapidly filling up with "liquid sweets."

He is using the extractor upon twenty-eight hives, leaving the residue to store box honey. And here I may mention that I never saw bees take to the honey boxes with so little apparent reluctance, as the doctor's bees do ; which I can account for, only by ascribing it to the kind of box which he uses. They are sectional, and capable of being enlarged to any size to conform to the size of hive upon which they are to be used, and may also be reduced to the size of a single comb. The bottoms are made of slats, such as are used in making frames for the brood chamber, and so arranged as to set over the frames in the brood department, but three-eighths ($\frac{3}{8}$) of an inch above them, thus making them of easy access to the bees. The bees seem to consider the surplus as a part of the main hive, judging from the promptness with which they build comb and store honey in them.

The doctor does not rely upon natural swarming alone, but swarms his bees at his own pleasure. His plan is as follows : He takes an empty hive and sets it in the place occupied by a full one, which we shall denominate No. 1 ; then he removes the combs from No. 1, and brushes the bees and queen all off in front of the empty hive, and returns the combs to No. 1 ; he then removes No. 2 (a full colony), and places No. 1 where No. 2 stood, and places No. 2 on a new stand. This is done while a large number of bees are absent in the fields, and appears to be a complete success.

We next examined his nucleus hives, and saw some queens which for beauty and size would be hard to excel. The hives in which the cells are reared, indicate by their numbers that the queen mothers are prodigies for prolificness, and their worker progeny fully attest their purity. The doctor is breeding queen bees to supply a special demand from customers, which he is unable to do in fall.

He showed me over two thousand pounds of extracted honey—taken from twenty-eight hives, which are of the number he had to feed in the spring, at three throwings each—which would make a man's mouth water.

He is selling full stocks as fast as he increases them by swarming, so that he will probably winter not to exceed ninety colonies this winter. His receipt against loss in winter, as well as for a large yield of honey, is to "keep your colonies always strong in numbers, if you have to feed to accomplish it," and I am induced to accept it

as an axiom, as his experience is to me conclusive proof of its correctness.

J. E. RICHIE.

Lima, Ohio, July, 1872.

[For the American Bee Journal.]

On the Utility of Drones.

A distinguished writer once said : "A coxcomb is a drone in the human family." Beekeepers might say with as much truth that : "A drone is a coxcomb in the bee family." Truly drones are useful, but only to a certain extent. If we ask Madame Nature why she caused so many drones to exist, she will answer that in a wild state hives are far apart and that a large number of drones are necessary to insure the queen's fertilization. Indeed, Madame Nature never does anything to no purpose.

But in our present state of bee culture, hives are numerous and close together, for we see sometimes as many as three or four hundred stands together on an acre of ground. Many apiaries number over fifty colonies. In these places a large number of drones is undesirable. The usual amount of drones hatched by three hives would be sufficient to insure fertilization of as many queens as can be raised in one apiary. An apiary of one hundred hives probably raises twenty times as many drones as necessary. These drones are not only useless, they are also noxious. First, they consume a great deal of honey and require from the bees a great deal of care. Then they are always in the way during the working season, obstructing the entrance with their clumsy bodies. Besides, after the harvest is over, they have to be destroyed by the bees. Some people say that they are very useful to keep the brood warm. But I will beg my readers to notice that drones never exist except at times when the weather is so warm that it takes but very few bees to keep sufficient heat in the hive. Experienced beekeepers also know that the bees drive them away from the brood, and destroy them as soon as the harvest ceases.

What then shall we do to destroy the large amount of drones that hatch in our hives every year? The old fashioned beekeepers say : "Cut their heads off before they hatch." But this gives a great deal of work for the bees in cleaning out the cells. Besides, all the honey spent on these drones is dead loss, and the combs are still there for the queen to lay in at the first opportunity. Drone traps are out of the question for the same cause.

Once upon a time, there was a man who travelled through the country selling patent hives and the six secrets of beekeeping. One of his secrets taught how to prevent drone laying. His method was simply this : "Cut out the drone comb." Was it not a miraculous invention? The poor wretches that paid \$10 for the knowledge of the famous secrets probably pondered more than once on the truth of the old saying : "Nil sub sole novum." (Nothing new under the sun.) Still, they *did* cut out the drone comb ; but, alas ! the bees immediately went to work

and built it all over again. They would have drone combs by all means. What then shall we do? Why cut it out and replace it with worker comb. That was not very hard to find either, and it has been done more than once.

Let us now see the advantage of replacing drone with worker comb. In May, a good hive measuring 1,600 square inches of comb in ordinary circumstances, will contain about 1,100 square inches of worker brood, and 100 square inches of drone brood. During the harvesting season, therefore, it will contain 5,500 workers and 3,200 drones. This hive will perhaps gather 50 pounds of honey, if the season is good. Let us now replace these 100 inches of drone comb with 100 inches of worker comb. Then with no more trouble and no more cost, we will raise 5,500 workers instead of 3,200 drones. (There are 50 cells and 33 drone-cells per square inch. See Langstroth, p. 74.)

If 5,500 workers gather 50 pounds of honey, 6,000 will gather 54 6-11 pounds; gain will be 4 6-11 pounds, which, at 25 cents per pound, will bring \$1.15.

Beekkeepers, does this pay?

C. P. DADANT.

Hamilton, Ill., Aug. 1, 1872.

[For the American Bee Journal.]

One-Story vs. Two-Story.

Gallup, why in the world can't you let us use the "new idea" in a two-story as well as a one-story hive? If I am not mistaken, the patented features of the idea is to give the queen plenty of room. Now, if the queen prefers to keep her brood at the bottom of the combs in mid-summer, let her do so, by continually removing combs of brood from the lower to the upper story, and thus gain the same point as with the double width one-story, namely, having constantly room in the centre and at the bottom.

The bees will take care of the brood in the upper story just as well as in the lower, and *my* queens persist on going into the upper story to lay, although they have only two-inch auger holes to go through. I think likely Novice's plan of having no division between the two stories is better.

A few years ago, Mr. Marvin or Mr. Baldrige told me he intended making a double width Langstroth, but as I have never heard anything about it, I do not suppose he found any great advantage in it.

Say, Gallup, aren't you a little mistaken about that 1,000 pounds from one hive?

C. C. MILLER.

Marengo, Ill.

A German writer says, "much time is saved in using tobacco smoke, and different other tools." His help uses 150 pounds of tobacco a year, besides this he smokes himself a quantity of cigars.—HULLMAN.

[For the American Bee Journal.]

The Season in Virginia.

MR. EDITOR:—I have to report a poor season for honey. Forty stands have not yielded more than half the honey I obtained last year from twenty-two. The drought set in so early as to cut short the crops of white clover, and our bees ceased to gather honey by the 25th of June.

It would gladden your eyes, however, to see one piece of fancy work I have—even NOVICE, I think, would open his eyes at a glass shade two feet high and ten inches in diameter, filled completely with beautiful honey, at least thirty-five pounds *net*. I propose to take it to our fair in Richmond this fall and hope it will stir our people up to the beauties, if not the profits, of apiculture.

I have only one stand which yielded as much as 75 pounds of box-honey; (I have never tried the extractor), and that is a hybrid, three removes from the pure queen. The fancy piece was made by unadulterated *blacks*, but from the slight opportunity I have had of testing the comparative merits of the two species (*blacks* and *Italians*), I lean decidedly to the latter.▲

B. J. B.

[For the American Bee Journal.]

Fastening Combs.

MR. EDITOR:—Having fallen upon a plan for fastening combs in the frames in transferring bees, which I have not noticed mentioned in the Journal, I will give it for what it is worth: Take strips of tin, $\frac{1}{4}$ of an inch broad, cut them to such lengths that they will extend on the comb $\frac{1}{4}$ inch, after being placed upon the frame at any distinct point, bringing the two ends around the corners of the upright, or any other point where the operator chooses to place them, forming right angles, bringing the ends of the strips in contact with the comb, which strips, if desired, can be pressed slightly into the comb, and will be amply sufficient to hold the combs in place, though filled with brood or honey.

Bees have done nothing extra here this season as yet, and have thrown out but few swarms. Some in old box hives have not had a swarm, and no surplus honey. I have doubled my number by dividing. I have ordered a honey extractor of Mr. J. T. Peabody, of Bloomington, Illinois, but do not expect to find much use for it this year, unless the fall season is better than the spring has been. As regards numbers, the balance is in favor of the black bees in this locality. I have some eight or ten queens from an imported queen, purchased from a neighbor of mine, at \$16.68, whose workers do not compare favorably with those from queens reared from a queen I purchased from Mr. Peabody last fall, which queen became a drone layer early this spring, before I could get her to stock her hive with workers.

Since I have mentioned this subject, I will

state that I informed Mr. Peabody of it, and that he has promised me that if he succeeds in raising some fine queens, he will send me one.

B. F. WIGGINTON.

Scottville, Ill., July 14, 1872.

[For the American Bee Journal.]

The Summer in Orchard, Iowa.

DEAR BEE JOURNAL:—You will probably wish to know how the bees are doing up in this part of the heritage. My first swarm came out June 2d, and here was the trouble with the Italians. They would rear brood and swarm when they could not gather enough to build any comb whatever. I therefore used what spare comb I had, and bought some of my neighbors, and then had to suppress swarming entirely. Not one square foot of comb was built in my apiary up to July 11th, by either stock or swarm, excepting by one swarm in the Adair section hive, and that swarm I fed all they could consume, as I had no comb to spare for that hive. By the way, I may have something more to say to the beekeepers about hives this winter, even though it may cause my friend Furman to have another spasm.

July 11th. The bees commenced gathering honey, and I then set nearly every stock to building comb. My old thirty-two pounder gathered one hundred and twenty pounds in just six days. They had no combs to build. I have now, July 24th, extracted fourteen hundred pounds. Yesterday and day before, it rained; to-day they have gathered rapidly, and I have commenced going over them again, and find them all full. The first crop of Linden dried up or blighted, but the second crop is doing better; still, the season thus far, is no comparison to the seasons of 1870 and 1871.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Transferring Bees.

Perhaps many persons would do better not to transfer bees. If you have only box hives, by all means transfer at least one; but if you have part box and part frame, you can keep the box hives busy making swarms. This spring, I had five box hives and two weak frame hives. I have placed the box hives on empty frame hives, obliging the bees to go down through the empty Langstroth, and then when they were strong enough to spare a swarm, I removed the box hive to a new locality, a rod or two distant, and put a frame or two of brood into the empty hive, when the returning bees from the box hive made a moderately good swarm. If I had a queen ready, I gave them one as soon as they had started queen cells. One box hive was made with feet, so I bored a hole in the bottom of a Langstroth hive, and placed it on top of the box hive, fastening the entrance to the box, and

obliging the bees to go up through the frame hive. I found I could take a swarm from each box hive once in two weeks, if honey yielded.

C. C. MILLER.

Marengo, Ill.

[For the American Bee Journal.]

The Honey Yield in Milledgeville, Ill.

We take a little leisure to write a few lines for your valuable journal. Out of thirty-four stocks of bees put into the cellar last fall, on the first of March, we had twenty-four remaining. They were quite feeble, but gained slowly during May. From the blossoms of the fruit trees, I did not realize much. Clover yielded but little honey. The hive placed upon the scales denoted a gain of but one or two pounds a day until about the 10th of July, when I came to note an increase, up, up, 3½, 4, 5, 6 and 7 pounds. The 11th of July, eight pounds was gained. Novice like, I looked in earnest to see from what source this change comes, when I see the bees come nearly all from the east loaded with Linden honey, from a grove one-and-a-half miles away.

July 12th,	9	pounds gain noted.
" 13th,	10	" " "
" 14th,	9½	" " "
" 15th,	8	" " "
" 16th,	6	" " "
" 17th,	2	" " "
" 18th,	0	" " "
" 19th,	0	" " "

Since the 19th a little loss has been sustained.

We use the extractor with two sets of frames. We could not dispense with the frames. One can hardly conceive the satisfaction they afford, until they have tried them. We have been suffering from a drouth, but things look bright now from a recent shower, and we look for better times for bees. Friends Marvin, Lee, Hubbard, and a host of others, let us hear from you a little oftener.

With many good wishes for the Journal, we remain its friend.

F. A. SNELL.

Milledgeville, Ill., July 22, 1872.

[For the American Bee Journal.]

Supers.

After an experience of three seasons with nearly every variety of SUPER, I still cling to the Colvin chamber, as by far the best means of gathering surplus honey. This chamber gives you the double advantage of a large receptacle, with a facility of subdivision (through the small movable sections of which I spoke in a former communication) equal, if not superior to any box arrangements, and solves the difficulty as between large and small receptacles so completely, that I wonder the system is not more generally adopted.

Alley's hive, I am obliged in justice to say,

has done admirably well this season. All the boxes (nine on one side, and eighteen on the other, the first holding, say, six-and-a-half, the other two-and-a-half pounds) except two, have been filled with first class honey. I would advise all my brethren to try at least one of these hives, and I think that (like myself) they will be induced by results to increase their orders. For *side delivery*, I consider it superior to anything I have ever seen, though still adhering to the opinion expressed above, that for *supers*, the Colvin chamber is unsurpassed.

B. J. B.

Barboursville, Va., Aug. 6, 1872.

Central Iowa Beekeepers' Association.

The Beekeepers' Association of Central Illinois, met in special meeting, at Lexington, McLean county, July 18th, 1872.

MORNING SESSION.

President, S. C. Ware, of Towanda, in the chair; J. Sawyer, of Normal, appointed secretary *pro tem*.

Messrs. Brooks, Peak and Price were appointed a committee to prepare questions for discussion. In the absence of the committee, the president made an interesting address upon the general subject of bee-culture, speaking particularly of the "New Idea" Hive, in which honey boxes are discarded. The committee presented the following report, which was adopted:

1. The best method of wintering, and spring management of bees.

2. The best method of increasing stocks and securing the greatest amount of honey.

3. Where, and how to transfer.

4. Is the frame hive superior to the box hive?

5. Is the Italian superior to the black bee?

6. General remarks on bee-culture.

Discussion on hives continued by the president, Messrs. Brooks and Reynolds.

AFTERNOON SESSION.

The convention proceeded to discuss the following topics:

1. The best method of wintering, and spring management of bees.

Mr. Cole stated that he had wintered twenty-five colonies on their summer stands, with the loss of five colonies.

Dr. Shilling moved his bees from the summer stand, and placed them near a fence, gave lower and upward ventilation; had fourteen colonies; lost none.

Mr. Brooks extracts all the honey from the two centre frames before putting bees into winter quarters; thinks this a successful method, as the bees need empty cells in the centre of the hive, that they may cluster in winter and generate heat; also recommends the making of a small hole in the centre of each comb, about four inches from the top of the frame, for winter passage for the bees.

Mr. Ware—Hives must have young bees to winter well; advises the use of the honey extractor on all hives having a surplus of honey in

the fall, but leaving enough for the use of the bees in winter; also recommends the taking out one frame from the hive and placing the other frames at equal distance from each other; feed bees in spring a little each day (whether they have honey in the hive or not), to stimulate breeding, so that a sufficient quantity of young bees may be had as early as possible to gather honey in its season; otherwise the profits of the hive is a failure.

Mr. Brooks would stimulate, not only with honey fed into the hive, but by giving them early in the spring, until they can get propolis, buckwheat, rye flour or Graham flour, placing it in troughs so that bees can get it easily.

Rev. Mr. Luccock said bees will take corn meal in preference to any other flour. Winters his bees in the house with success; puts a cloth over top of frames, pours a syrup on it for hive feeding in spring and winter.

Mr. Ledgerwood recommends a covering made of wire cloth placed on the frames in continued cold weather, so that the bees may discharge thereon; his plan is to remove the hive to a warm room long enough to warm the bees, when they will ascend to the wire cloth and empty themselves; the cloth can then be removed and the hive returned to its place.

Second topic—The best method of increasing stock, and securing the greatest amount of honey. Mr. Anderson said large colonies are needed for the largest amount of surplus honey.

Mr. Brooks increases stocks by first removing the old hive some distance from its stand, and putting in its place an empty hive with frames properly arranged; he then opens the old hive and removes a frame of brood with adhering bees, together with the queen, which he places, after removing an empty frame therefrom, in the centre of the new hive. The empty frame is then placed in the centre of the old hive, the hives closed, and the process is complete; would give the old colony a queen cell if he had it at the time of dividing, if not, would open the hive ten days after the division and destroy all queen cells but one in the queenless hive.

The rule expressed by other speakers for increasing stocks was to have small hives and good queens.

Third topic—When and how to transfer. Mr. Ledgerwood, transfers in the spring of the year, as soon as warm enough to handle; transfer straight combs into frames, the cells the same side up as in the old hive, using a transfer board to lay the comb upon when transferring the comb.

Mr. Brooks said the safest plan, as a general rule, is to transfer when there is plenty of honey in the field.

Fourth topic—Is the frame hive superior to the box hive? This being generally admitted, the topic was not discussed.

Fifth topic—Is the Italian superior to the black bee? Mr. Ware asks, are not black bees as good as Italians? The question was answered in the negative by a number of speakers, who said the Italians are more hardy, more prolific, better honey gatherers, &c., &c.

The question asked by Mr. Ware was more

for effect than anything else, he being a friend and advocate of the Italian bee.

Sixth topic—General remarks on bee-culture. Rev. Mr. Luccock said it was not always the largest cell that furnishes the best queen; he had small queens that produced his best workers.

Mr. Brooks said the fair-sized cells, as a general rule, give the best queens.

Remarks by different speakers.—Queen cells taken from new combs give brighter queens than those taken from old combs.

Avoid, if possible, handling queens with the hands, as the scent of the fingers endangers the life of the queen when replaced among the bees.

Keep the bees together in the hive.

Change combs often, else the bees will degenerate in size. Italian bees in the West are handsomer and larger than those bred from eastern queens, the preference being given to the chestnut colored queens, as they are nearer the color of early importations, and are better in every particular.

FORAGE FOR BEES.

Mr. Sleath exhibited two specimens of honey producing plants, Rocky Mountain bee plant, and sweet clover, said to continue in bloom a long time, and to be continually visited by the bees; their use was strongly recommended. Alsike clover and buckwheat were also recommended.

Mr. Sawyer, of Normal, exhibited the "Pea-body" honey extractor, and demonstrated its merits by extracting honey before the association.

Mr. J. V. Books, of Lexington, exhibited an observatory hive of bees, in which the queen, as well as the other bees could be seen performing their several duties.

A subscription, amounting to \$3.50, was taken up to defray current expenses.

A number of persons signed their names and became members of the association.

On motion, the following committee was appointed to select topics for discussion at the next regular meeting of the association: W. G. Anderson, J. V. Brooks and J. L. Wolcott.

Report of a number of beekeepers of this and adjoining counties from spring up to July 18th, 1872, being a fair average report of the condition of bees in central Illinois.

E. Sager Hudson, transferred eight swarms in spring, increased to nineteen; no surplus.

Wm. P. T. Cool, Meadows, twenty-one old colonies; had five swarms; no surplus reported.

J. Hamer, ten colonies in the spring; had two swarms; but little honey.

J. H. Cox, Hudson, seven stands in spring; thirteen stands now, by artificial means; surplus, thirty pounds.

M. S. Sill, Blue Mound, three colonies; no swarms; hives all full; ten pounds surplus.

W. H. Anderson, Lexington, fifteen colonies in spring; have now thirty; no box honey; might have some extracted, if attended to.

S. C. Ware, Towanda, seventeen stocks; no swarms or surplus.

W. G. Anderson, McLean, eighty colonies; seventeen natural swarms; surplus 200 pounds.

J. L. Westervelt, Livingston county, eight colonies; seven swarms.

S. B. Ledgerwood, Forrest, fifteen in spring; fifteen swarms.

W. E. Price, Iroquois county, nine colonies; no swarms; no honey; hive covered with bees.

H. Peek, Normal, four colonies; four swarms; fifteen pounds surplus.

J. R. Nutt, three colonies; six swarms, surplus, two boxes.

Wm. Reynolds, Lexington, seventy-two colonies in fall, 1871; wintered them all in good condition; sold in spring, 1872, fifteen colonies; surplus honey in boxes, about 150 pounds.

On motion, the thanks of the association were given to the citizens of Lexington, for their hospitality; also to Messrs. Mahan & Co., for the use of their hall.

Adjourned, to meet in regular session in September, of which due notice will be given in the papers.

J. ANSLEY, Secretary.

J. W. GLADDING, Cor. Sec., Normal, Ill.

[For the American Bee Journal.]

The Yield in Bethlehem, Iowa.

MR. EDITOR:—It is generally conceded that extremes succeed each other. Last season's abundant yield followed by the present one of scarcity, goes to prove the correctness of the old saying.

The spring was remarkably cold and wet, confining the bees to their hives; even when a fine day did come the flowers did not yield honey enough for their brood. We had three days that bees worked upon wild cherry, gathering to each strong stock about ten pounds from that time until the 1st of July. There is no honey producing flowers of any considerable amount, as we have no white clover, and but a few acres of Alsike, that did not appear to yield honey. Last year the bees literally swarmed upon it. About the first of July, Linden began to come out, lasting about five days, yielding about the same amount that wild cherry did. After that we have had about a month in which there are no honey producing flowers in bloom, unless early buckwheat should yield the necessary supply, which I doubt; nevertheless my bees are in good condition, and ready to gather their stores, should an opportunity be given them to do so. Don't you think, Mr. Editor, that such a season as the present my bees suffered some from dysentery. I lost one stock *in toto*; had two queenless, one drone laying queen, and about twenty with not over three pints each to the swarm. Whole number reported 52—should have been 53. If defunct bees had been in demand, I think I could have supplied them by the bushel. I will give my winter's experience in a future number, in time for putting bees in their winter quarters. Novice thinks Linden never fails, with me 1870 and 1872, looks something like it.

FRED. CRATHORN.

Bethlehem, Iowa, July 15, 1872.

[For the American Bee Journal.]

A Query and Remarks.

MR. EDITOR:—By this time I suppose you think I am very fond of asking questions. Like every lover of knowledge, I am not ashamed to let what I do not know be known. What I want to know this time is, if a queen is impure whose drone progeny is both black and Italians. This seems very strange, yet it is true. Some are marked very nice, but the stripes are dark, and others are entirely black, having no stripes at all. Her worker progeny are very nicely marked, all being of a uniform color and having three yellow bands. I raised some queens from her and they are also light, but I have not yet tested them. I watched the young drones as they came out and they are marked as above.

"Some beekeepers seem to be down on artificial queens. Well, I know nothing about their queens, but I do know that I raised some this season (black) that I would not give for some natural queens I have, in regard to prolificness. They may not be as long lived, and there are some that are not half as prolific as natural queens, but this ought not to discourage any one who intends to keep bees, for he must expect to have failures, and when he does fail in anything, he must not denounce it as impracticable, but try it again until he finds it is so.

C. E. WIDENER.

Cumberland, Maryland, July 22, 1872.

[Translated from the Bienenzeitung.]

My Uncapping Instrument.

After I had procured for myself an extractor, I for some time uncapped the combs by means of a sharp knife. But this was too tedious work, so I set to work to invent a machine that would do the uncapping. To this end I constructed a cylinder 3 inches long and 1 inch in diameter, in which I placed pegs made out of strong wire, at such distances apart as would correspond with the cells of worker comb. With this I cut through the cover of the cells, the work going on very quick. But as the combs were often much injured by the pegs, I was not satisfied with the machine, and set to work again to remedy this evil. The idea then presented itself, that the covers of the cell being pure wax would readily melt. I took a small tin cup, put water in it and placed it upon a stove. When the water began to boil, I took the cup and gently slid it over the surface of the comb. And what joy! The covers at once dissolved and swam upon the honey. I place the thus uncovered combs in the honey extractor and took out the honey. The combs were quite clean, and were not in the least injured. The tin-cup being without a cover, the water cooled off so rapidly, that I was compelled almost every minute to warm it again. To remedy this, I had made an entirely closed box of tin in the shape of a smoothing iron. It is 3 inches long, 2 inches broad, and 1½ inches high, and contains about ¼ pint of water.

On the top it has a small opening like a flask, in which to pour the water. This is stopped with a cork. A handle 4 inches long is attached to this.

With this instrument I uncapped my honey combs very readily, and since the water is shut in tightly, the instrument will not so easily cool off; I can readily uncover two combs without rewarming.

I hope that this instrument will lighten the labors of the beekeepers; any one can readily have one made for himself.

ADOLPH HELLER.

Kopidlou, in Bohemia, Sept. 20, 1871.

[For the American Bee Journal.]

A Day with Novice.

MR. EDITOR:—In moving into Ohio, which I did last spring, I found myself in the vicinity of Medina, where our apiarian friend, Mr. A. J. Root, lives. I was not long in planning a visit to his apiary, where 8,000 pounds of honey, worth nearly \$2,000, were *slung* out of sixty-four hives, two years ago.

A ride by rail of two or three hours landed me at the place.

About the middle of June last, I found him doing his second day's slinging, and from the number of barrels in sight, I thought him a man of "great expectations." Mr. Root very kindly explained to me all that I desired to learn in relation to his ways and means "of conducting his apiary." I enjoyed the day exceedingly, and returned a wiser if not a better man.

Mr. R. has been using for several years an equal number of the American and Langstroth hives, but, after cool deliberation, has piled Young America with three patents against the fence, and uses nothing but the Langstroth, or Langstroth simplified.

I find him to be a good inventive mechanic, and his "tin corners" are a very important matter to beekeepers, and is the perfection of beauty and durability to the comb frame; only by seeing them in actual use can we gain a true idea of their beauty and utility. I do not know how I can do the beekeeping fraternity a better turn than by urging them to send for a set and try them for themselves. It seems to me they never can be superseded, for what is there of a bee hive but a movable frame in a simple box or hive? Nothing. Therefore he who contributes to make the Langstroth frame (there is none other) *better*, and the box or case easy for farmers to make and easy for them to handle the bees with, contributes to the general good; but he who dabbles in mothtraps, claptraps and fanciful notions, throws dust in the eyes while he rifles the pocket. I speak as a practical apiarian, mechanic, and hive manufacturer.

D. W. WHITING.

Shelby, Ohio.

For cleanliness and neatness, they may be a mirror to the finest dame.—BUTLER.

[For the American Bee Journal.]

The August Journal.

The Journal came to hand, a few days earlier than last month, thereby enabling us to make a few comments "on time." We cannot speak from personal knowledge of the merits of the remedy for bee-stings, related by Mr. Langstroth, not having a fondness for *such* experiments. Our way is to "extract" the sting immediately, and then bathe the parts with cold water—the colder the better. If we get badly stung, when our blood is heated from over exertion, we make a strong whiskey sling, and drink it at once. We have no doubt but this would prove effectual in any case, yet do not get stung purposely, in order to try the remedy. Mr. Langstroth's experience with the Italians as honey gatherers, agrees exactly with our own. And, then, Novice has had trouble with the honey extractor, and we likewise. We had been studying a remedy, too, and think we shall adopt something similar. We can recommend Novice's door step, for we have used one almost exactly identical for the past seven years. They have *paid* us for all the time and trouble they cost.

Basswood was nearly an entire failure with us this year. There were only three or four days that it yielded honey of any account, and we have known our bees to gather more in one day heretofore, than they did in the whole three weeks that it was in blossom this year.

We do not attribute the failure to dry weather, but rather to the unfavorable state of the atmosphere at the time.

There was an item in regard to Novice's prolific queen, that we overlooked in our hurry last month. Was she reared from an egg or larvæ, and how many days elapsed after the bees commenced the cell before she hatched? We think that the most prolific queens are reared from the egg, and in such stocks as are *well stocked* with young workers. Mr. Liston discourses upon the advantages of artificial swarming, and nearly all apiarians will agree that the way the bees manage the things when left to choose for themselves, is not conducive to either pleasure or profit.

We take no stock whatever in "Management for Luck," but endeavor to manage our bees with a fixed purpose in view of accomplishing certain definite ends. Whoever manages bees with the expectation that "luck" will accomplish any desirable ends, will be apt to be woefully mistaken. Yet Mr. Chapman gives most wholesome advice.

We now pass on to listen to friend Argo's story of his failure to control pure fertilization. We are sorry that he is so dispirited as to give up *trying*; for we think that it is quite essential that we be able to *fully control* this matter. Where would have been our improved breeds of cattle, horses, hogs, &c., if man had not been "master of the situation." And if we can only control this little matter of fertilization in confinement, we can make as much progress as the breeders of our domestic animals have. It

may be "against nature" and even though "all attempts will fail," we are "*positively certain*" that the thing *can be done*. Not that we have discovered any method that will prove a success without a failure, but we have a plan, that we are sure—yes, "*positively certain*"—will be successful "nineteen times out of twenty," if rightly managed. But we don't use any fertilizing tent, wire-cloth cages, or any other expensive and complicated contrivances, either. The great secret as we believe is to bring queens and drones *together upon the wing*, without frightening the timid "fathers of the industrious hive." But as we have said but little upon this subject heretofore, we will not now leave it, with the remark that if any one wishes anything more from us upon the subject, that we will answer any questions through the Journal.

We are quite sure that many of the readers of the Journal would like to have friend Argo tell them how to increase thirty swarms to one hundred, and obtain so much honey, if the bees built their own combs. We have never, yet, equaled that, although having succeeded to our own entire satisfaction.

Friend Gallup must have been in a happy mood when he penned his "reply" or else possess a faculty for making things turn out pleasantly. That is right; let us all endeavor to cultivate amiable and friendly feelings, towards one another, work together for the good of all, and success, in the largest sense of the term will crown our honest efforts. We pass over the translations from the foreign journals, not that they are unworthy of notice, for we read them with interest; and hope you will, Mr. Editor, give them monthly hereafter. We notice one little mistake in our article last month; in the eighth line, after the words "Italian queens" read "with as much pleasure," and you will have our meaning. We now close, by wishing all beekeepers, prosperity in every *honest* effort to advance the cause of bee-culture.

HERBERT A. BURCH.

South Haven, Mich., Aug. 12, 1872.

Bees are scarcely making a living this year. I cannot account for it. All conditions are favorable now, although during May, usually our best month, it was very dry. Last year I had a hive filled in six days after extracting during the month of June. This year they have increased none during May or June. My hives are very strong; have sixty. Can it be a case of overstocking?

I feel very hopeful yet, as we usually have good fall pasturage.

G. W. BATES.

Somerville, Tenn., June 17, 1872.

A desolate and cheerless place is thus described by Southey, in his wild and wondrous poem of *Thalaba*:—

"The solitary bee,
Whose buzzing was the only sound of life,
Flew there on restless wing,
Seeking in vain one blossom, where to fix."

THE AMERICAN BEE JOURNAL.

Washington, September, 1872.

All communications and letters of business should be addressed to

GEO. S. WAGNER,
Office of the American Bee Journal,
WASHINGTON, D. C.

Our readers will read with pleasure the interesting letters of Mr. Dadant, published in another part of the Journal.

We publish in this month's Journal translations of two very able articles on the "Theory of Wintering Bees." We will endeavor next month to give some further translations on the same subject. The true manner of wintering bees has been attracting in Germany a great deal of attention, and given rise to some discussion. We hope that the results will be such that we will soon be able to winter our bees with certainty and safety.

The time is approaching when beekeepers will hold their conventions. We trust that those beekeepers who are members of associations will see to it, that they are conducted in the interests of bee-culture, and not in the interest of some patent-right men who wish to use the association as a means of advertising their patents. Just such conduct as this has brought no little disrepute upon beekeepers' associations. The only objects of the association should be the interchange of each other's experience, and the discovery of the best methods of conducting bee-culture.

We have received inquiries from Ohio, asking whether the Patent Office had granted a patent for a bee oplate. Upon inquiry at the Patent Office, we find that there has been; and in explanation of what to some may appear strange, we would say that the Patent Office is required to grant a patent for any new combination of materials made for the purpose of accomplishing some specific purpose, but that they in no case enter into a decision as to the merits or worthlessness of the combination. We give below the specification referred to, stating, at the same time, that it is patented, and cannot be used unless the right is purchased from the patentee or his duly authorized agents. As to its worth or worthlessness, we give no opinion.

UNITED STATES PATENT OFFICE,
ALEXANDER Y. ROZENBURY, OF WATERLOO, INDIANA.
Letters Patent, No. 115,107. Dated May 23, 1871.

IMPROVEMENT IN COMPOSITION FOR STUPEFYING BEES.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern :

Be it known, that I, Alexander Y. Rozenbury, of Waterloo, De Kalb county, in the State of Indiana, have invented a new, useful, and improved composition, or oplate, for stupefying bees; and I hereby declare the following to be a full and exact description thereof.

The nature or essence of my invention consists in the composition or oplate for stupefying bees described in the following specification :

To enable others skilled in making compositions to make and use my invention, I will proceed to name the several ingredients, and describe the mode of mixing them.

I put into a bottle or jug, that will hold one gallon, half a gill of the oil of anise, half a gill of the oil of peppermint, seven-eighths of a quart of alcohol, and mix them well together, and then add two quarts of water and one table spoonful of white sugar, and mix the whole thoroughly together.

To use this compound, put fifteen or twenty drops upon some rotten wood, or other material that will burn and make a smoke, and set it on fire, and blow the smoke into the hive, which will stupefy the bees so that they may be removed, or their comb taken out of the hive without the danger of being stung by the bees, and without injuring the bees, as they will revive again on being exposed to fresh air, or by blowing air into the hive.

Having described my new composition, or oplate, for stupefying bees, and the mode of compounding and using it,

I claim as my invention :—

The above-described composition, or oplate, for stupefying bees, compounded in about the above proportions specified.

A. Y. ROZENBURY.

Witnesses :—JAS. S. BEST and AMOS HALE.

Our beekeeping friends will readily pardon our departure from the bee-line of the Journal when they read the extract given below, and will join with us in wishing Col. Joseph Leffel and wife much happiness.

MARRIAGE OF ONE OF THE SMALLEST MEN IN THE WORLD—A PETITE PAIR—THE CEREMONIES AND CIRCUMSTANCES.—Col. Joseph Leffels is known by everybody in this vicinity. He is diminutive in stature, but remarkably active and vigilant in business, so much so that by faithful and earnest attention he has amassed a considerable competency. He is one of the bee kings of this country, and his success in the management of these industrious insects has been the subject of much comment among the bee fanciers.

Col. Leffel is 45 inches high, weighs 55 pounds, and is 38 years old. From those figures it may be known that his stature is diminutive. The colonel sports a handsome moustache and imperial, and unlike the other diminutives of Thumb, Nut, Dot, et. al., his face is manly and his features strong. His mind is fully developed, strong and vigorous as his years demand. It is strange that the colonel should live to this age a bachelor, but such is the case. The blandishments of the female sex have been thrown aside, and immersed in the cares of business, he has had no time to devote to the pranks of Cupid. But where is the heart that has not at some time succumbed to the smiles of woman. To love is human, to marry divine. The lady whom Col. Leffel selected as partner of his joys and sorrows is Miss Evaline Beasley, a young lady who is but five or six inches taller than himself, weighs 75 pounds, and is 23 years of age.

The wedding took place last evening, at the real-

dence of Mr. Reuben Leffel, about three miles from Springfield. There were present at the wedding only the relatives of the bride and groom, and Mr. Harrison of this city. The bridal pair were finely dressed. The groom arrayed in a broadcloth dress suit, with white vest, and the bride in pink tarleton with flowers tastefully arrayed.

The marriage service was performed by Rev. J. Steck, of the English Lutheran Church, and was impressive and appropriate.

After the ceremony was performed the bridal cake was served.

The twain who are now one, will pass the day in the city with their brother-in-law, Mr. M. Irey, and it is contemplated that a tour to Kentucky, where the bride's relatives live, will be taken shortly. The congratulations of a host of friends and relatives are extended to the petite couple.—*The Springfield (Ohio) Advertiser.*

In the advertisement of Mr. M. C. Hester, of Charlestown, Indiana, in last month's Journal, the following error occurred in the Post-office address: "Chorlstown;" whereas, it should have been *Charlestown, Clark county, Indiana*. Any persons having written to Mr. Hester, and failed to receive a reply, will now know the cause of it.

CORRESPONDENCE.

Bees came through the past winter weaker than usual; not much dysentery, so far as I have heard, about one-third ($\frac{1}{3}$) as many swarms this summer as common, none of which have gathered sufficient stores for winter; cause, drouth. Very little surplus; less than I have ever known.

E. S. F.

Washington Co., Ohio, 8th mo. 12, 1872.

Bees are doing very poorly in this section of the country. There has been no increase of swarms, excepting a few near the timber, and less surplus honey up to this date, than for years past. The exceedingly dry season may have been the cause. White clover has been very plenty, but the bees have gathered no honey from it. This is the report at the Beekeepers' Association, which met at Lexington last week. Accept my best wishes for the prosperity of the Journal.

SAMUEL C. WARE.

Towanda, McLean Co., Ill., July 24, 1872.

The season in this country for bees has been a poor one, up to this date. The weather has been so dry that white clover dried up about as soon as it blossomed, and at this date, one-half of the bees have no more than one-half enough to winter on. They may better their condition before the buckwheat season is over.

L. BURDICK.

Galesburg, Kalamazoo Co., Mich., Aug. 5, 1872.

I am always glad to receive the American Bee Journal, and peruse its contents. In regard to bees in this section, I think one-half died during the past winter. In 1871, I lost thirteen colonies from twenty. In the past winter I lost five from seven. In May last, I purchased eight colonies, and now have twenty-two strong work-

ing colonies, and have two colonies that did not swarm. I have doubled a number of them. I have taken fifty-seven pounds of white honey from two of my young colonies, and this is as good quality as I ever saw. My bees are all *black*. I have started twice with Italians, and have lost them in wintering.

THOS. PIERCE.

Gansevoort, N. Y., Aug. 1, 1872.

We have had too dry weather, altogether, for either crops or bees. My bees, however, have made some box honey, and there is considerable in the second story, which I shall extract, as well as in the lower story, before buckwheat blossoms. I expect a good harvest from buckwheat, as my swarms are strong, and in good condition for work. I received a Peabody extractor from Mr. Alley, a few days ago, which I put to a use yesterday, that I had not thought of when I ordered the machine. We had a very heavy rain and wind yesterday, after which I noticed the cover of one of my two-story hives on the ground. Of course, the contents of the hive had received a thorough drenching. It was most dark, but I succeeded in emptying the water and unsealed honey from all the combs in the upper story, which gave the combs a chance to dry. I shall serve the lower story in the same way this morning. There are some other accidents in the history of that swarm, which I would like to speak about, if I had time.

E. KIMPTON.

Cedar Creek, Ocean Co., N. J., Aug. 16, 1872.

[For the American Bee Journal.]

Michigan Beekeepers' Association.

The fifth annual meeting of this society will be held at Kalamazoo, September 17th to 20th, same time and place as State Fair.

The sessions will be held in the Court House. There will be two each day,—morning session at 8 A. M.; evening session at 7.30 P. M.; thus not interfering with attendance at the fair.

TUESDAY EVENING.

Address by President Rood. Subject, "The Progress and Needs of Apiculture."

WEDNESDAY MORNING.

Queens and Queen Raising. Paper by J. M. Marvin, St. Charles, Ill.

Paper by Rev. Wm. F. Clark, Toronto, Canada.

WEDNESDAY EVENING.

Mortality among Bees during the winter of 1871. Papers by J. H. Thomas, Brookline, Canada; Dr. G. Bohrer, Alexandria, Ind.; and Rev. J. G. Portman, Benton Harbor, Michigan.

THURSDAY MORNING.

Some Experiments. Paper by D. L. Adair, Hamesville, Ky.

Benefits and Methods of Artificial Swarming. Paper by Mrs. E. S. Tupper, Des Moines, Iowa.

THURSDAY EVENING.

Something about Hives. Paper by E. Gallup, Orchard, Iowa.

Address by A. I. Root ("Novice"), Medina, Ohio. Subject, "The Apiary and its Arrangements."

FRIDAY MORNING.

Voluntary papers and extempore addresses.

All the papers will be discussed, and other subjects may be proposed, at any time during the meeting.

Rev. L. L. Langstroth, father of Scientific Apiculture in America, will be present if health will permit. No subject is assigned him, as we shall all hope to hear from him on all subjects.

We are sure that we need add no other inducement to attendance, than the remark that all the above-mentioned papers are promised, and that Mrs. E. S. Tupper, and Messrs. Wm. F. Clark, A. I. Root, and Gen. Adair, all promise to be with us if business engagements will permit.

A. J. COOK,

Sec. Mich. Beekeepers' Ass'n.

AGRIC'L COLLEGE, Lansing, Mich., }
August 9, 1872.

[For the American Bee Journal.]

Compton, Iowa.

MR. EDITOR:—Bees nearly all died out here last winter. I had the best luck of any one I know of; I saved twenty nine colonies out of forty-five. Most of those that had but a few colonies have given up the business in despair, partly because they lost their bees last winter, and partly because, with the old box hive, they cannot make it pay. I have eleven of the Quimby box hives, two Langstroth hives, and the rest in Quimby comb frame hives. The frames in the Quimby hives are 11x19 inches. The main objection I have to them is, that the combs are apt to break when extracting the honey, especially when full of honey. I think if they were put crosswise, as Gallup makes his, they would be better. Being a carpenter I made my own extractor; it cost me about \$9.00. I can use it quite readily. I have extracted about 250 pounds of honey this year, and have about 50 pounds in boxes. Bees did but little here till the first of July. I doubled up some of my swarms, as recommended on page 187 of the Bee Journal, and some of them I put in supers as recommended by A. Grimm. I like both plans very well. But I put a small swarm into a hive when they had swarmed once, but had become strong again; and the next morning I found my new swarm nearly all dead. I have been somewhat discouraged about beekeeping myself; so far I have not been paid for my trouble. I have taken great pains with my hives, and have tried to inform myself on bee-culture; and now that I have learned so much, I have to throw away what I have learned; so I think I shall try a while longer. The main bee pasturage here is white clover and buckwheat. I find I have to unlearn many things. I first studied Quimby and took him as my guide, but

I shall follow him no longer. I begin to have a mind of my own on the subject. My bees were very weak this spring, and the strongest made but little honey till the first of July, so I concluded the fore part of the season was a poor time for bees. I lost a large number of combs in frames by not knowing how to take care of them. When too late, I learned that burning sulphur under them would kill the moths. I do not think that bee culture will be over done in this country; but few farmers will try the business, and but few of those that try will succeed. I keep my bees in a dry cellar in the winter. I never lost a swarm till last winter. The rats trouble my bees in the cellar. How shall I prevent them from hurting my bees and gnawing my hives. Mrs. Tupper says rats and mice will not trouble bees, but I know better by sad experience.

LA FAYETTE NORRIS.

Compton, Iowa, Aug. 6, 1872.

[For the American Bee Journal.]

Bee Items from Oneida, Ill.

MR. EDITOR:—I think very likely there was considerable of a "smile" among beekeepers on reading Mr. Langstroth's quotation of Mr. Sydsen's remedy for bee stings. At least there was a big *smile* here. I am too much of a coward myself to stand and take sting after sting just to see whether he would stop the hurt and swelling of the first. I have been stung three or four times in my face, at one time, and and it will hurt and swell as bad as a single one.

I have read, that after one or two seasons of severe stinging, a person gets so inoculated with the poison that no swelling will follow the sting, which is true in my case. Last year and this year I received a great many stings, which at first would swell enormously, but now there is no swelling, unless on the front of my face, and then hardly enough to be noticed. The hurt is as severe as ever, though.

I use the deep frame hive, 10½x15 inches inside measure, and the brood is *not* at the *bottom* of the frame, but spreads from the top to the bottom, some of the brood cells being on the comb guide at the top. There is generally a small circle of honey in each upper corner, which grows larger as you leave the centre of the hive.

I hope brother Gallup will give us that promised article on wintering bees on their summer stands in time to utilize it, for it is impossible for me to winter them in any other way.

I think I shall remember my first experience with a honey extractor. I have one that I got up myself, and the first time we tried it, we put in a small piece of comb, forgot to put in the plug (which is at one corner), and set it whirling. The first thing we knew the honey was out of the comb, out of the can, and on to our clothes, the floor and table. "You can believe we were satisfied it *would* work."

I suppose some speculating Yankee will be for importing some of those Australian bees, that have no stingers, but, if he does, he will have to put some *brass spurs* on to them (as they used

to do on the Shanghai roosters), or the other bees would rob them.

No profits, to any amount, from bees this season in this vicinity, unless we have a better harvest in September.

We have had rains and strong cold winds the large part of the summer, though he have had a few intensely hot days.

We have a little extra honey on hand, but dare not dispose of it, as we may need it to feed the bees on before winter.

There is two or three other bee journals taken here and I get them to read, but I like the dear old American the *best of all*.

W. M. KELLOGG.

Oneida, Ill., August 12, 1872.

[From the Sulphur Springs (Texas) Gazette.]

EDITOR GAZETTE:—Thinking that it will be interesting to your readers, I give you the proceedings of a meeting held here last night, for the purpose of organizing an association to encourage scientific bee-culture, and to promote the interest of those engaged in this branch of industry.

The meeting was called to order, Hon. W. H. Andrews in the chair; then proceeded to organize, by electing the following officers to serve until a permanent organization can be formed:

Hon. W. H. Andrews, of McKinney, President; John W. Crabtree, of Sulphur Springs, 1st Vice-President; W. G. Suggs, of Mt. Pleasant, 2d Vice-President; J. Hervie Sparkman, of Sulphur Springs, Secretary; J. M. Wester, of Sulphur Springs, Treasurer; Wm. Sickles, T. P. Garret, and J. M. Wester, Committee to draft Constitution and By-Laws.

The following subjects were then selected for discussion at the next meeting:

1st. The Italian bee, as compared with the black bee—its advantages and disadvantages.

2d. Moths—their habits, effect on bees, and the prevention of the same.

3d. The requisites of a good hive.

4th. The advantages and profits of scientific culture over the old (do-nothing) system of bee-raising.

5th. Texas as a honey-producing country.

The association then adjourned to meet at Sulphur Springs, October 15th, 1872.

We hope to see all those engaged in bee-raising, in attendance, as we intend to make the meetings of the association interesting and instructive, by the discussion of the topics selected. We also hope to have some essays written by scientific apiarists, on subjects of interest to all.

J. HERVIE SPARKMAN, Secretary.

Sulphur Springs, Texas, June 21, 1872.

[For the American Bee Journal.]

The Season at Binghampton, N. Y.

We have had a very good season here. The bees have killed no drones yet. Alsike did well to start on; then we had a cold, wet week, just when white clover should have done the best, and it yielded none afterward. In fact, we have

seen one hundred bees in red clover this season, in June and July, to one on white clover; but we always notice those seen at work on red clover have the full number of stripes; the dark bees in hybrid stocks don't seem to fancy red clover. We had the best yield of basswood honey that we have ever known. There is but little basswood in this section, and so many bees having died off the past winter, I presume ours had the full benefit of all the basswood in the range of their flight. Not having weighed all my surplus, I can't report yet; but from my best stock (which was in a standard Langstroth hive, as usual), I took in to the extent of eighty-one pounds gross, about the 25th of July, and it is now at work on buckwheat, in a case of twenty-four two pound frames, which are built down to the bottom with comb; but most of my stocks had the swarming fever very bad, the last part of June; honey yielded very slowly, just enough to keep them breeding rapidly, but not enough for them to build much comb in boxes, and the weather was excessively hot. My apiary is located in a very warm place, and in some cases, I have taken out nearly one-half of the brood combs and given them empty frames, cutting out all queen cells; but they would swarm in a day or two, and if put back would come out again and go into some other hive or nuclei, and if prevented by blocks, would scatter perhaps into five or six other hives, leaving a lot of boxes on the old stand, partly filled. The side box hive is the best swarming hive, by all odds. It looks now as if I should not get a pound of surplus from them. I got none from clover, and if they do not pick up soon, I shall get none from buckwheat. Wishing all success to the Journal, I remain as ever,

Yours,

J. P. MOORE.

[For the American Bee Journal.]

An Early Swarm.

This has been so far a poor season for bees. Little surplus honey will be stored. Swarming commenced late; hybrids give the best satisfaction as honey gatherers. A swarm that was kept in the cellar all winter and fed, filled the hive with bees and swarmed the second day after being taken out, about the middle of April. Of course in this latitude there was no forage at that time, but by giving ready made comb and some feed they sustained themselves. I relate this as an unusual occurrence, showing that early swarms can be produced this way.

A NEW WAY OF HIVING A SWARM.

A few weeks since a swarm of a friend lodged in the top of a large sized willow tree some 50 or more feet up, no ladder long enough could be had, and the nature of the tree would not admit climbing, so the bees must go. But no, they hung, and hung, and stood a heavy thunder storm which rained and blowed tremendously without dislodging them. A hunter coming along, shot the limb off clear striking the ground with great force, and never did bees go into a hive quicker.

J. L. FISHER.

Tiffin, Ohio, July 15, 1872.

ITALIAN BEES.

I wish to say to my friends and beekeepers generally, that I have supplied my apiary with a superior lot of imported and home-reared queens of *undoubted purity*, for the coming season.

Italian Queens for sale. For circular address

R. M. ARGO,

Lowell, Garrard Co.,

Feb., 1872—5mos.

Kentucky.

ITALIAN QUEEN BEES.

We will send by mail, Italian Queen Bees of this year's rearing, whose hatching brood shows three distinct yellow bands. Price, \$4 each, or \$40 per dozen, postpaid.

JOSHUA SHAW & SON,

Chatham Center,

Feb., 1872—7mos.*

Medina Co., Ohio.

HONEY EXTRACTOR.

I offer to bee cultivators a Honey Extractor, which is acknowledged by those who have used it, to be the most substantial and convenient in the market. For circulars, giving cuts, with prices, &c., Address,

HENRY W. STEPHENSON,

Apr. 1872—6 mos.

Cincinnati, Ohio.

PROGRESSIVE BEE CULTURE

Is the title of a little book that explains all the mysteries of the bee hive. Price 25 cents, by mail.

THE "NEW IDEA" BEE HIVE, doubles the yield of honey. It controls swarming, is easy of access, and can be handled by a woman or an invalid.—With a view to its general introduction I am selling county and small territorial rights at half price, and offering other unusual inducements.

D. L. ADAIR,

Hawesville, Hancock Co., Ky.

May, 1872—2mos.

COMB GUIDE PRESS.

With this instrument a child can put Wax Comb Guides on twelve frames in five minutes.

Price of the instrument, delivered at the Express office, \$1.25. Send stamp for a sample.

COMB-FASTENING PRESS.

This implement fastens quickly and substantially Dry Combs, or Comb Foundations, in the frames. Price, \$2.

Comb-Guide Press and Comb-Fastening Press, together, \$3. When ordering, send the inside length of the top bar of your frames.

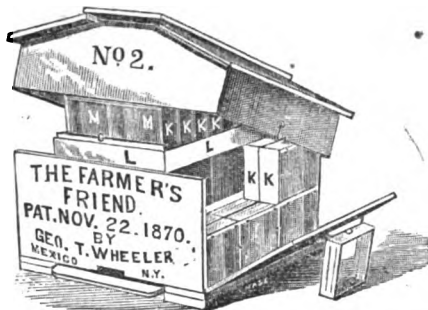
Patent solicited.

CH. DADANT,

Hamilton, Ills.

April, 1872.—tf.

A NEW BEE HIVE,



With improved honey boxes and frames. Two styles, Nos. 1 and 2. Illustrated Circular and price list sent free.

GEO. T. WHEELER,

Patentee and Manufacturer.

T. H. B. WOODY,

General Agent,

Manchester, St. Louis Co., Mo.

June—1872.

ITALIAN QUEEN BEES.

I shall breed Italian Queen Bees for the coming season, from imported mothers of undoubted purity. Safe arrival and purity guaranteed, in every shipment. Queens sent by mail. Address,

T. H. B. WOODY,

Manchester,

Dec., 1871.—tf.

St. Louis Co., Mo.

HIVE FACTORY FOR THE WEST.

ESTABLISHED IN 1860.

Have made and sold from 400 to 1,000 Langstroth Hives each year since.

Hives and boxes always on hand and for sale at reasonable rates, either complete or in K. D. condition.

Send for price list. Address,

W. T. KIRK,

P. O. Box, 1140,

Mar. 1872.—3 mo,

Muscataine, Iowa.

QUEENS! QUEENS!!

After August 1st, 1872, I shall send my best queens by mail for \$2.00 each. Purity and safe arrival guaranteed.

NUCLEI hives with 4 frames each, one pure queen, fumigator, and best feeder in use, \$4.00.

H. ALLEY,

Wenham, Essex Co., Mass.

FOR SALE.

One hundred colonies of Italian bees *must* be sold before next winter. Ten colonies for \$90. Fifty for \$400. All above fifty at \$8 per hive.

Address

J. WARD,

Fort Atkinson, Jefferson Co., Wis.

June, '72—4mos.

WM. H. FURMAN,
Breeder of Pure Italian Queens,
 AND PROPRIETOR OF THE
Right of the "Langstroth Hive" for Iowa.

I have been engaged in Breeding Pure Italian Queens for the market for the last twelve years. My prices are as follows :

One stock of Italians with Langstroth hive, \$20	
One stock with farm right of " " " " " "	25
One Queen warranted pure Italian.....	5
Three " " " " " "	13
Five " " " " " "	20
Thirty " " " " " "	100

Orders filled for Honey Extractors and Knives. (See Circulars.)

I may have a large lot of Queens *fertilized in confinement* at a heavy expense. For these my terms are as follows :

One Queen under care of Dr. N. C. Mitchell, \$18	
One Queen under care of Mrs. E. S. Tupper	
or Mr. Wm. King, each	\$50

Please do not send orders for these too fast.

Address, **WM. H. FURMAN,**
 Cedar Rapids, Linn Co., Iowa.

ITALIAN QUEENS FOR 1872.

I shall sell queens at the following prices for the coming season :

For 1 queen.....	\$4 00
" 2 "	7 00
" 8 "	10 00
" 5 "	15 00
" 12 "	80 00

Nuclei hives, with four frames each, one pure queen, feeder, queen cages, and fumigator, \$5.00.

All queens warranted pure bred from imported mothers and in full colonies. Send for circular.

Address, **H. ALLEY,**
 Ap., 1872—tf. Wenham, Essex Co., Mass.

PURE ITALIAN QUEENS.

Bred from pure and selected mothers, and progeny pure and tested in my apiary. Send by mail, safe arrival guaranteed.

A. SALESBURY,
 Ap., 1872—tf. Camargo, Ill.

ITALIAN BEES FOR SALE.

50 hives pure Italian Bees for sale. Ten hives for \$100, if taken this fall; or twenty-five per cent. higher next spring.

For particulars address,
 Nov., 1871.—tf. **W. WOLFF,**
 Jefferson, Wis

ITALIAN QUEENS AND STOCKS.

I am prepared to fill a limited number of orders for Italian Queens and Full Stocks, of my own rearing. Price list sent free.

M. C. HESTER,
 Charlestown, Clark Co., Indiana.
 July, '72—3mos.

PRICES CURRENT FOR 1872

OF

Imported Italian Queen Bees.

Encouraged by the results of last year we have again made arrangements for the supply of genuine, fertilized queen bees, from the same apiary in Italian Switzerland.

Our central position enables us to forward Bees to America with a much better prospect of safe arrival than is possible when sent direct from the European continent.

We repack these queens with other companion bees, furnish honey in the comb for the journey, and forward by the swiftest steamers to New York (freight paid), at the following prices :

	£. s.
In April and May, eight queens	6 10
twelve "	9 10
In June, eight queens	6 4
twelve "	9
In July and August, eight queens	6
twelve "	8 8
In September and October, eight queens .	5
twelve "	7

The money must accompany the order, and as the United States post offices now issue money orders payable in London, greater facilities are offered for safely remitting. Our quotations are made in English money.


Queens can only be sent in parcels of eight, twelve and upwards. Every care will be exercised to insure safety, but all risk will be incurred by the party ordering.

It is a satisfaction to us to see in the February number of the American Bee Journal that a correspondent, to whom we sent a parcel of queens last year, writes thus : "to our surprise and joy we found every queen alive."

Letters containing remittances will be acknowledged by return mail and advice sent of the parcels being dispatched.

Orders executed in rotation.

Address,
GEO. NEIGHBOUR & SONS,
Apiarians,
 149 Regent street, London, W.

 A few volumes of scarce old Bee Books on sale. A list will be forwarded on receipt of stamp.

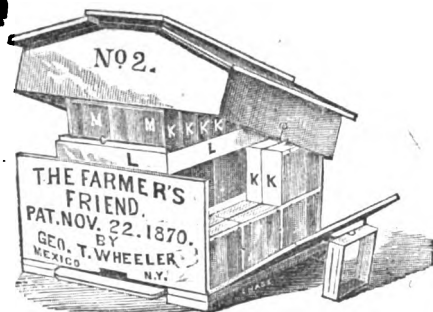
April, 1872.—6 mos.

ITALIAN QUEEN BEES.

After eleven years' experience in propagating Italian Queens and sending them to nearly every State in the Union, patrons and others are informed that I have made arrangements to propagate on a large scale the coming season ; consequently the price will be low. My propagating mothers are from the best districts in Italy. All queens sold by me are warranted pure and fertile. I will sell a few good swarms with young queens in Langstroth Hives for \$10 each, or \$12 with my new surplus arrangement. Send for circular.

W. W. CARY,
 Colerain,
 Feb. 15, 1872. Franklin Co., Mass.

A NEW BEE HIVE,



With improved honey boxes and frames. Two styles, Nos. 1 and 2. Illustrated Circular and price list sent free.

GEO. T. WHEELER,
Patentee and Manufacturer.

T. H. B. WOODY,
General Agent,
Manchester, St. Louis Co., Mo.
June—1872.

ITALIAN QUEEN BEES.

I shall breed Italian Queen Bees for the coming season, from imported mothers of undoubted purity. Safe arrival and purity guaranteed, in every shipment. Queens sent by mail.

Address,
T. H. B. WOODY,
Manchester,
St. Louis Co., Mo.

Dec., 1871.—tf.

QUEENS! QUEENS!!

After August 1st, 1872, I shall send my best queens by mail for \$2.00 each. Purity and safe arrival guaranteed.

NUCLEI hives with 4 frames each, one pure queen, fumigator, and best feeder in use, \$4.00.

H. ALLEY,
Wenham, Essex Co., Mass.

ITALIAN QUEEN BEES.

We will send by mail, Italian Queen Bees of this year's rearing, whose hatching brood shows three distinct yellow bands. Price, \$4 each, or \$40 per dozen, postpaid.

JOSHUA SHAW & SON,
Chatham Center,
Feb., 1872—7mos.* Medina Co., Ohio.

HONEY EXTRACTOR.

I offer to bee cultivators a Honey Extractor, which is acknowledged by those who have used it, to be the most substantial and convenient in the market. For circulars, giving cuts, with prices, &c., Address,

HENRY W. STEPHENSON,
Oct. 1872—6 mos. Cincinnati, Ohio.

Novice's Gleanings on Bee-Culture;

OR,

How to realize the most money with the smallest expenditure of Capital and Labor in the care of Bees.

RATIONALLY CONSIDERED.

We shall, during the year of 1873, issue four numbers with the above heading, probably about the 1st of January, April, July, and October.

We shall endeavor to have it contain all that is most valuable on Bee-culture as it comes before the American public; but shall also endeavor to carefully test all improved processes, devices, and implements, before recommending them.

We shall also correspond with all large dealers in honey with a view to furnishing a ready sale and *prompt pay* for all that our subscribers may produce.

We will pay *in cash* for short, condensed articles containing new and original matter, or new and valuable devices and processes, that we deem meritorious. Such articles as should prove too lengthy for our pages will be, with the writer's consent, handed over to the **AMERICAN BEE JOURNAL**.

We shall have no room for theories or conjectures, and in short, for nothing that is not of *cash value* to the

APIARIAN.

Advertisements will be received at 10 cents per line each insertion, cash in advance; and we require that every advertiser satisfies us of his responsibility and intention to do all that he advertises, and that his goods are really worth the price asked for them.

We shall fearlessly caution our readers, and under all circumstances endeavor to expose any humbug or swindle that may appear connected with Apian science.

If matter of sufficient interest should accumulate, we reserve the privilege of issuing any or all of the four Numbers before the dates mentioned.

The Numbers will be issued in proper shape, and with the intention of binding, and will be compiled with a view of making a valuable book on apiculture.

The size of each Number will depend somewhat upon the number of subscribers.

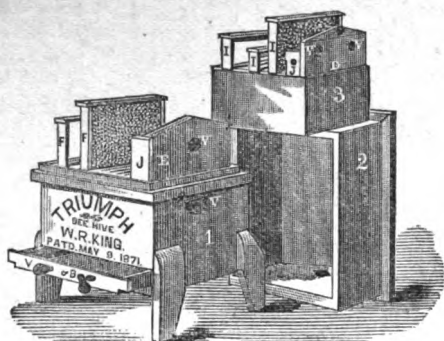
Terms, 25 cents for the four Numbers, cash in advance.

Address,

A. I. ROOT & CO.,
Medina, Ohio.

"TRIUMPH" BEE HIVE.

SECTIONAL VIEW.



After two years' practical experience with the Triumph Movable Comb Hive, I feel fully warranted in recommending it to the beekeeping public as having no superior in the country. It is the best winter hive ever invented, and equally as good for summer; for it is the only well ventilated hive ever offered to the public. I will give any practical beekeeper the privilege of trying one of the Triumph hives before buying the right.

State rights sold low for cash, or will be traded for either real or personal property.

County rights, from \$40 to \$400.

Township rights, from \$10 to \$50.

Farm rights, \$5.

One sample hive, with farm right, \$10.

One hive to those wishing to try it, \$5.

Send for Circular and Price List.

ITALIAN BEES AND PURE TESTED QUEENS.

For full colonies, in Triumph hive, . . . \$20 00
For full colonies, in Triumph hive, with right. 25 00

For single tested queen, in May, 6 00

For six tested queens, in May, 30 00

For twelve tested queens, in May, 50 00

For single tested queen, in June and July, 5 00

For six tested queens, in June and July, 25 00

For twelve tested queens, in June and July, 40 00

For single tested queen, in Aug. and Sept., 4 00

For six tested queens, in Aug. and Sept., 20 00

For twelve tested queens, in Aug. and Sept., 6 00

All from the latest importations. Purity and safe arrival guaranteed. I also give a premium to each customer. Address,

WILL. R. KING,
Franklin,
Simpson Co., Ky.

Feb., 1872—4mos.

A GREAT CHANCE FOR AGENTS.

Do you want an agency, local or travelling, with an opportunity to make \$5 to \$20 a day selling our new 7 strand White Wire Clothes Lines? They last forever; sample free, so there is no risk. Address at once, Hudson River Wire Works, cor. Water St. and Maiden Lane, N. Y., or 16 Dearborn St., Chicago Ill. Sep. 1871. tf

ITALIAN QUEEN BEES.

Bred from imported stock. Queens sent by mail. Purity and safe arrival guaranteed. Instructions for making and operating a "Queen Nursery," with one sample cage by mail, for \$1.25. *Rafraichis Odorators* used in introducing queens, sent by mail for 60 cents. For circular, address,

T. G. McGAW,
Lock Box 64,

Mar.—6 mo. Monmouth, Warren Co., Ill.

HONEY WANTED.

HIVES AND BOXES FOR SALE.

We have made arrangements for the sale of a large amount of honey. Parties having honey in the comb, or extracted, will please correspond with us at once, stating how much they have to spare, quality, condition, price, &c.

Langstroth Hives, and Glass Honey Boxes for sale, in quantities to suit purchasers. When you write, state how many hives and boxes you want, and we will send you the prices. Address,

NATIONAL BEE HIVE COMPANY,
St. Charles, Kane Co., Ills.

Jan'y, 1872—tf

ITALIAN QUEEN BEES.

Send stamp for my New Circular for 1872 containing prices of Pure Italian Queens from my direct importations. Full colonies of Italian Bees. Alsike clover seed, &c.

T. B. HAMLIN,

Importer and Breeder of

ITALIAN QUEEN BEES.

Edgefield Junction, Davidson Co., Tenn.

May, 1872—tf.

CHOICE FOWLS.

The advertiser has for sale,

DARK BRAHMAS,	PARTRIDGE COCHINS,
LIGHT BRAHMAS,	WHITE COCHINS,
BUFF COCHINS,	WHITE LEGHORNS,
and HOUDANS,	

At \$4.00 per pair, or \$6.00 per trio. We insure all Fowls to reach the purchaser in good condition. Address, ISAAC LYNDE,

Marlboro, Stark Co., Ohio.

Aug., 1872—4 mos.

THE AMERICAN NATURALIST.

A POPULAR ILLUSTRATED MAGAZINE

OF

NATURAL HISTORY.

TERMS, \$4.00 PER YEAR.

PEABODY ACADEMY OF SCIENCE,

Salem, Mass.

AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

VOL. VIII.

DECEMBER, 1872.

No. 6.

[For the American Bee Journal.]

Novice.

Bless your heart, old Bee Journal, we really believe we shall have to take off our coat, and go for you in shirt sleeves.

Right following our article in October No., Gallup recommended a plan of out-door wintering, as far from our instructions as can be, and the foreign articles give advice both ways, in the sun, and positively out of the sun, and some one (no name, but thank him for the criticism) says our syrup aint made right, and then Mr. Burch says we took three columns, etc. Did you ever!

It is quite probable Gallup's bees wintered nicely, as he fixed them; but can we afford to cumber our apiary with all that trash and rubbish? for, were we to prepare our seventy-one hives as he mentions, think of the labor compared to that of just setting in a properly arranged bee house (we have put in sixty in an hour, *alone*), and then, seriously, can they be wintered on the same amount of honey? and, then, suppose we prefer small colonies, *a la* Hoemer.

Weigh your hives carefully, our "summer stand" friends, and tell us how much honey is consumed, and how many weak colonies are lost, and we will soon have accurate data.

Quinby remarks, that to get the full benefit of a house or cellar, at least fifty colonies, we think, should be in the one room. Now, how are we to enable one colony, alone, to enjoy the same advantages by making non-conducting walls about, and thus deprive them of the benefit of the sun's rays besides? A dead air space, and the outer wall glass, it is true, as given on page 88, is an approach to it; but, even then, can we consent to use anything so frail and cumbrous?

Please don't anybody patent the idea!

Now, then, once more! and we shall keep harping on the subject until Europe and America gives us proof of its fallacy, if they can. Are not bees occasionally wintered well under almost all circumstances, with upper and lower, and even *horizontal* ventilation, as Gallup says it is called; and even, too, with *no ventilation*? Adair says they don't need any, and he can give you,

that have never tried it, powerful proof; for bees do winter sometimes well with no holes in the top *at all*; and, too, they *don't* winter at times when they have every kind of ventilation.

Is ventilation the trouble at all, that beekeepers have quarreled so much about? Is it rather not food? And now we come to it. Will not pure, wholesome food (sugar syrup) winter them with any *kind* of ventilation, out doors or in, only that out in the weather they heed much more.

Our unknown friend, page 91, gives us proper credit, but a host of others forget to; and Alley, besides, page 93, says he has used it for fifteen years. We think he must have forgotten to add that he only knew he succeeded, without knowing why, until we mentioned it.

Gallup, too, says he had recommended it long ago; but until some one can show in print where they have ever advised sugar syrup as being *safer* than honey, we shall claim our "laurels."

Thank you, Mr. Leuthe, page 87; you, and every other beekeeper, can *surely* get a barrel of honey from every ten stocks, the poorest season we have had in the last *seven years* (we did not know a queen before then.)

It certainly looks badly to see so many correspondents telling about "poor seasons," and the "poorest ever known." It is the "beekeepers," and not the seasons. If you would only throw away your old honey boxes, and use an extractor long enough to *know* it far easier, besides, being neat clean and safe.

At present the complaint is, it don't sell; and we hereby petition the Editor to allow every beekeeper having extracted honey unsold, to state the same in this JOURNAL, how much, and what they will sell it for. Many are writing to us for it now, and we have sold our last for eighteen cents; and it retails in Cleveland for twenty-five cents.

As freight is considerable, those who wish to buy can then send for that which is nearest their locality.

I thank you, Mr. B. Lunderer, page 87, for a new idea. After using cloth quilts over a year, we could not think of using boards again.

Make them like pillows, with a *case*, and when the case is covered with propolis, remove, and wash with benzine, or make a *new case*. If they

see light through a single thickness, they are more apt to eat through.

We think you will like it better to have the hive come half-inch higher than top of frames, and then you can tuck in the quilt so that "nary bee" can get above it, which they never should do.

Page 75 and page 88. "What would Novice do?" and "What killed bees in such a hive as that?"

1st. Coffee sugar syrup sealed up in combs, and, 2d, because they didn't have pure food such as coffee sugar, etc., etc. *Bless your hearts*, have we not told it often enough before?

And now, Mr. Unknown, we like you tip top, but 'twas "naughty" to say our experience was limited. "The proof of the pudding," etc., for our syrup don't candy, and won't; so, there; and never did, only when we forgot the cream of tartar; but you are right part of the time, too. Listen: We made a barrel of syrup our way, stirred it with a hoe about ten minutes, guessed at the quantity of water, and as you say, the sugar didn't all dissolve, but we put on our float, and the bees took up all that had dissolved, and then we stirred in more hot water; the result was only this, that the syrup was so thin they could not cap it over for several days, but it don't candy at all.

We now boil it, because we can't make syrup thick as honey otherwise. But our receipt is all right, we know; and we *don't know* your vinegar receipt is just what is wanted for bees. *Do you?* Why do you put in so much water, and have all the trouble to boil it out again?

Page 92. When you raise queen cells, don't never remove your choice queen at all. *Swap frames with a queenless hive*, or make any hive you wish queenless, and then "*swap*" frames.

If you can't swap frames in less time than you can remove queens, you had better make one such a hive as we took *three columns* to explain, and yet, friend Widener, page 96, will turn the bottom board *upside down*. Bless you, Mr. W., why did you suppose we insisted on having bottom boards just like cover, bevelled around outside edge of top and all.

Mr. Burd, you really astonish us. Did you consider, as Quinby once said, that that hive might have been our "pet idea," and how you might hurt us. We expected, of course, some heavy criticisms on such a hive, too cheap and simple, etc., but not from *you*. On the contrary, we were really worried, for fear you would explain the whole thing to the "Deacon," or something to that effect, as your "own ideas," and then we worried more for fear Mr. King would be afraid it might injure *his* hive; but as it is, we are really pleased, for you can stand on "your own feet," and tell us what desirable things can be done with "*your hive*" that can't be done quicker with ours; or, rather, with the Langstroth hive as used by

NOVICE.

Let beekeepers avoid personalities in their discussions; they cause irritation and bad feeling, and do much to hinder the progress of true bee-culture, while they do little or nothing to develop truth

[For the American Bee Journal.]

The Bay State Hive.

Novice thinks that perhaps this hive has been unduly praised in the Journal. Now, as I may, in some measure, have laid myself open to this charge, I deem it due to Mr. Alley to say, as I have said once before, that while I do not pretend in the general way to make a *comparative* estimate of different hives, yet, that I do feel at liberty to state facts, and here is one. During the present season I had a Bay State Hive on a frame, together with an American hive on one side, and a Langstroth on the other. Neither of the latter two gave me an ounce of surplus honey, while I obtained between sixty and seventy pounds from the B. S. Hive.

Now, we know that the Langstroth is a good hive, and the friends of the American claim great credit for that particular style, but here with equal stocks, and with perhaps some difficulties, which I could not discover or remedy; we find the most marked difference in the results.

I wish to do no injustice and to exhibit no improper partiality, but certainly I do not think that I at least have praised the B. S. Hive unduly; but after saying this much, it may be proper for me to add, that I am not personally acquainted with Mr. Alley, and have no other connection with his hive than the fortunate possession of *one* of them, and I should be glad if every subscriber to the Journal would "go and do likewise," that they may then more intelligently decide the question as to the amount of praise to which the B. S. Hive is entitled. Does Novice own one? If not, won't he try one?

B. J. B.

[For the American Bee Journal.]

Dronings.

Profiting by NOVICE's suggestions, I have the impudence to think that I have actually improved upon his latest *bee-feeder*. I take a tin bucket, with a top, of course (of height and diameter to suit different hives), have a flange of about an inch depth around the bottom, perforated with innumerable small holes. It is better to have the smooth side of the bottom below, as the bee thereby can insert its proboscis more readily. The bucket being placed over the holes of the honey-board, the bees come up and feed undisturbed and *undisturbing*.

I would caution my brethren against putting too much water with the sugar fed to bees. Having erred in this myself, I soon found a stream of liquid sweets trickling down, and before I could correct the error, a horde of robbers made their appearance. The feed should be boiled well, for I agree with the anonymous critic on NOVICE, that simply to pour boiling water over the sugar is by no means sufficient. With a bucket of this description, 12 inches in diameter, and say 4 or 5 inches high, I think that 25 pounds of coffee sugar could be readily taken up by a colony in twenty-four hours.

2. I thank you for the translated articles on the varieties of the Linden. Besides those mentioned, there is still another variety, known as Stone-lime or Linden, peculiar to the forests of Lithuania (in Russian Poland) from which the celebrated honey known as *Liepie* is gathered. This honey readily commands (from crowned heads and the nobility) two ducats, or say two dollars a pound. The wax is of peculiar whiteness, the flavor is exquisite (described as uniting vanilla, thyme, and mint), and is not so heating as ordinary honey, this makes it especially valuable as a vehicle in pharmacy. *How* mentions that in the neighborhood of *Kowno* (where this honey is produced) the inhabitants have no regular bee-hives, every peasant is at liberty to go into the forest, even without the direct permission of his chief, and select the trees for his bees; the tree is hollowed out to the proper size, the bees are put in and left without much fear of any robbers, except the bear; for the law is so severe that few have the temerity to expose themselves to its penalty, for any one detected in robbing a hive is liable to have the *omphalos* (let us call it) taken out, and his entrails wrapped round and round the very tree he has robbed.

3. These cool evenings in October make the necessity for *Novice's* alighting boards particularly manifest. The bees tempted out by the warmth of the mid-day sun, and the attractions of the Golden Rod and the countless fall flowers, are very apt to keep up their work until after sunset, and becoming somewhat chilled as they return "heavy laden," are liable to fall in front of the hive if they miss the entrance, and unless this alighting board is there to receive them, hundreds, perhaps, in a large apiary, we might say thousands, "fall to rise no more."

4. Coming back to the Linden, shall not every one of us who has the time and opportunity, be assimilated by the example of *Novice*, to commence at once to have a Linden orchard. How small the trouble compared with the grand results for ourselves, and for our children after us. When we think of the countless tons of honey that might be produced through many generations from these beautiful trees, a double significance is given to the exclamation that Sir Walter Scott puts in the mouth of an old Scotch laird: "BE AYE STICKING IN A TREE, JOCK! IT'LL BE GROWING WHILE YE ARE SLEEPING."

5. I have read carefully all that has been said (not only in the last number, but throughout the year) in reference to the wintering of bees, and whilst I have no practical experience in this matter, it is very evident to me, that the great mortality among the bees is mainly due to *over-kindness*; the bee, like the rest of God's creatures, needs a certain amount of freedom, and this shutting up in cellars and other winter quarters, is entirely at war with the nature and habits of our little friends. Even in the coldest climates, a day comes now and then during winter, when they might and would take a "purifying flight;" but, shut up in close quarters, they are obliged either to "resist the call of nature," or else to do what is so opposite to all cleanly creatures, "*foul their own nests*," and then *dysentery* is the obvious result. I firmly believe

that if bees were treated as Gallup advises (*A. B. J.*, October, 1872, pp. 74, 75), they would winter well, even in Siberia! but you must be careful to follow Gallup's advice *fully and entirely*, for, depend upon it, if you fill the top of your hive with an absorbent material, without providing *openings above* for the escape of the redundant moisture, you are only giving additional point to the wit and wisdom of the old doctor, who, in denouncing the administration of opium for colic, said it was like *locking the thief up in the house to do all possible mischief!* B.

Chataqua County Beekeepers in Council.

The Chataqua County, N. Y., Beekeepers' Association convened at Mayville, September 3d. President J. M. Beebe, of Casadaga, in the chair. In the absence of the secretary, Mr. O. C. Blodgett, of Pomfret, was appointed secretary *pro tem*.

Mr. Beebe opened the meeting with a few appropriate remarks. "He hoped the speakers would confine their remarks to the points in question; rambling discussions are idle, and our time is too limited to-day to admit of them." He then read a paper that went to show *the amount of honey accumulated each day by a swarm of bees*:

At twelve o'clock on the 27th day of June I hived a young swarm of bees and immediately placed them upon scales, and found their weight to be 8½ pounds. My object in weighing them was to ascertain how much a medium swarm would weigh, and to know how much honey they gathered from day to day.

I have kept them on the scales since the 27th of June up to the first of the present month, in order that I might more fully understand to what extent the wind influences the production of honey. I have for years noticed that when the wind was in some directions the bees were inactive, and upon examining clover blossoms, I found they were nearly destitute of honey, while, when the wind was in other directions and the general weather the same, the clover yielded honey, and was freely visited by bees. I find all honey-yielding plants are in a like manner affected by the wind.

Not feeling satisfied with near observations, I determined to try old Fairbank's platform, and have accordingly kept a record from day to day, of the direction of the wind, state of the weather, and amount of honey gathered each day, which is as follows:

June 27. ¼ day, wind south, rainy; honey gathered ¼ pound.

June 28. Very warm, wind south; honey gathered 1½ pounds.

June 29. Very warm, wind south; honey gathered 1½ pounds.

June 30. Warm and clear, wind southwest; honey gathered 2½ pounds.

July 1. Warm and clear with high west winds; honey gathered 2 pounds.

July 2. Warm and clear, wind southwest; honey gathered 2½ pounds.

July 3. Warm and pleasant, wind southwest; honey gathered 3 pounds.
 July 4. Warm and rainy, wind southwest; honey gathered $\frac{1}{2}$ pound.
 July 5. A little cooler, wind southwest; honey gathered $3\frac{3}{4}$ pounds.
 July 6. Pleasant, wind west; honey gathered $2\frac{1}{2}$ pounds.
 July 7. Pleasant, wind west, cool nights; honey gathered $1\frac{1}{2}$ pounds.
 July 8. Pleasant, wind southwest; honey gathered 2 pounds.
 July 9. Pleasant, wind southwest; honey gathered $2\frac{1}{2}$ pounds.
 July 10. Rainy forenoon, wind southwest; honey gathered $1\frac{1}{2}$ pounds.
 July 11. Salty, wind southwest; honey gathered $2\frac{3}{4}$ pounds.
 July 12. Warm and cloudy, wind southwest; honey gathered $1\frac{1}{2}$ pounds.
 July 13. Warm and clear, bees commence work on basswood; honey gathered $2\frac{3}{4}$ pounds.
 July 14. Warm and clear, very still; honey gathered $3\frac{1}{2}$ pounds.
 July 15. Warm and cloudy, afternoon rainy, wind southwest; honey gathered $1\frac{1}{2}$ pounds.
 July 16. Warm and cloudy, wind south; honey gathered $3\frac{3}{4}$ pounds.
 July 17. Warm and cloudy, wind west; honey gathered 1 pound.
 July 18. Rainy forenoon, wind south; honey gathered $\frac{3}{4}$ pound.
 July 19. Pleasant and cool; a loss of $\frac{1}{2}$ pound.
 July 20. Clear, wind south; honey gathered $\frac{1}{2}$ pound.
 July 21. Rainy all day, wind west; scales balance.
 July 22. Clear and cool, wind west; scales balance.
 July 23. Rainy, wind northwest; loss $\frac{1}{2}$ pound.
 July 24. Clear and cool, wind west; scales balance.
 July 25. Warm, wind southwest; scales balance.
 July 26. Warm, wind northwest; loss $\frac{1}{2}$ pound.
 July 27. Warm and clear, wind northwest; loss $\frac{1}{2}$ pound.
 July 28. Pleasant, wind west; loss $\frac{1}{2}$ pound.
 July 29. Pleasant, wind west; honey gathered $\frac{1}{2}$ pound.
 July 30. Cloudy and warm, wind southwest; honey gathered $\frac{1}{2}$ pound.
 July 31. Pleasant forenoon, rainy afternoon, wind west; scales balance.
 August 1. Cloudy, wind west; scales balance.
 August 2. Cloudy and cool, wind west; loss $\frac{1}{2}$ pound.
 August 3. Cloudy, wind north; loss $\frac{1}{4}$ pound.
 August 4. Clear, wind west; loss $\frac{1}{4}$ pound.
 August 5. Clear, wind southwest; honey gathered $\frac{1}{4}$ pound.
 August 6. Clear and warm, wind southwest; scales balance.
 August 7. Pleasant, wind southwest; scales balance.
 August 8. Pleasant, wind west; scales balance.
 August 9. Warm and pleasant, wind south; honey gathered $\frac{1}{2}$ pound.
 August 10. Warm and clear, wind south; scales balance.
 August 11. Warm and clear, wind southwest; scales balance.
 August 12. Warm and cloudy, wind south; honey gathered $\frac{1}{2}$ pound.
 August 13. Warm and cloudy, wind southwest; scales balance.
 August 14. Warm and cloudy forenoon, rainy afternoon, wind south; honey gathered $\frac{1}{4}$ pound.
 August 15. Cloudy, wind north; scales balance.

August 16. Cloudy and warm, wind southwest; scales balance.
 August 17. Warm and cloudy, wind southwest; scales balance.
 August 18. Warm and cloudy, wind south; honey gathered $\frac{1}{4}$ pound.
 August 19. Warm and cloudy, wind southwest; scales balance.
 August 20. Warm and pleasant, wind northwest; loss $\frac{1}{4}$ pound.
 August 21. Warm and cloudy, wind west; honey gathered $\frac{1}{2}$ pound.
 August 22. Warm and cloudy, wind west; honey gathered $\frac{1}{4}$ pound.
 August 23. Warm and pleasant, wind north; loss $\frac{1}{4}$ pound.
 August 24. Pleasant, wind south; honey gathered $\frac{1}{4}$ pound.
 August 25. Pleasant, wind southwest; honey gathered $\frac{1}{4}$ pound.
 August 26. Pleasant, wind southwest; honey gathered $\frac{1}{4}$ pound.
 August 27. Clear, wind north; loss $\frac{1}{4}$ pound.
 August 28. Pleasant, but cool, wind south; scales balance.
 August 29. Rainy, wind south; loss $\frac{1}{4}$ pound.
 August 30. Cold and cloudy, wind north; loss $\frac{1}{4}$ pound.
 August 31. Cold and windy, wind north; loss $\frac{1}{4}$ pound.
 September 1. Pleasant, wind west; scales balance.
Cook—I notice that we had no east or north-east winds those days. I would like to inquire if any one has noticed any different effect of those winds upon the working of bees?
Beebe—I have long believed that north winds blasted honey.
 Mr. Beebe then proceeded to read a series of questions for the consideration of the convention, as follows:
 What is the best mode of wintering bees?
 What is the best plan for making artificial swarms?
 Which will make the most honey, an artificial, or a natural swarm?
 Wherein are the Italian superior to the black bee?
 Is a young queen suitable to raise queens from? Will her daughters be hardy and prolific?
 What is the best plan for introducing queens?
 Where bees are lacking a sufficient supply of honey, for wintering, would it be safe to supply that deficiency with a syrup made of a coffee sugar?
 What is the best method of making sugar for feeding bees?
 What is the best time for fall feeding?
Cook proposed that each question be discussed separately.
Ira Whitaker Kiantone—I have noticed that bees work best on buckwheat morning and night. I would like to inquire if $8\frac{1}{2}$ pounds is weight of hive and bees, or bees alone?
Beebe.— $8\frac{1}{2}$ lbs. is the net weight of the swarm.
 Some swarms are heavier than that. Mr. E. J. Batchelor, of Stockton, once had a swarm that weighed 9 lbs., and made 8 lbs. of honey in one day in June a few years ago. There is a lessening of weight during the night.
 The question was then taken up, "What is the best mode of wintering bees?"

P. G. Tambling, Pomfret—I have kept bees for 80 years with various success. I began with one swarm and have had as high as 73 at a time. The year before the great bee famine I had sold down to 33 swarms. That winter I lost 80 swarms, leaving me 3, and one of them was the old original one that I began with. The spring of 1871 I began with 13 swarms, and took off about 200 lbs. of honey. This season I began with the same number, and have only about 50 lbs. of honey. I would like to know the reason of the falling off.

Cook—The honey was not in the flowers this year; bees do not make honey, they only gather it. Nature must first furnish them with it in the flowers.

Tambling—I have tried wintering in cellar; failed. Generally winter them on the platform where they stand in summer. Think they need some protection from northwest wind. In the cellar they became damp and mouldy.

Cook—I have given some attention to the question of "wintering bees." In the house you cannot keep them cool enough. In the cellar too damp. He then went on to explain his mode of wintering. For this purpose he had a hive constructed with an air space between the bees and the outer hive, to prevent the extreme cold from penetrating. Above the bees his hive has an air chamber, in which he places some dry material for absorbing the moisture that accumulates from their breaths.

Whitaker—Must confess that the great drawback to beekeeping is the loss in wintering. Have tried wintering in cellar, but that would not do. The comb is thin in new swarms, and needs some protection. I built a house on the plan of an ice house, and placed my bees in it the winter of 1870 and '71. But in the spring I had trouble in setting them out. They would mingle together and get confused, and I lost many in the spring with plenty of honey on hand. I believe out of doors best, with some light protection. Stakes driven down around a hive, and straw placed in between, is a good way. The sides want protection as well as top. One hive was under a snow bank and came out well.

Cook—The experience of Mr. Osmer, of Minnesota, is often quoted, but he has found that as our winters are so different from theirs, that it was not safe to follow his plans here. Bees wintered in the house were more apt to rob.

Tambling—How can you prevent bees from coming out in winter and getting lost?

Cook—Keep the light out of the hive.

Whitaker—During the January thaw, bees ought to be allowed to go out. It is natural for them. Will not do well if too much confined.

L. Weeks Ellery—Have had some experience in wintering bees for 15 years. I think they need some protection, but not too much. I live in a hollow, and am somewhat sheltered from the wind. I usually winter my bees in a rough shed. When I have lost bees they have generally starved. Began with 6 swarms last spring; have 10 now.

J. O. Wood—I have good success out of doors; cold time cover with straw. Hives are double-walled. Use chaff for absorbent. Last winter

out of 33 lost 8. When drifted over deep, should be shovelled out when it thaws. When covered with straw, must have upper ventilation.

Fayette Munger—I have kept bees for a number of years. Have used different kinds of hives. I like Beebe's the best. My bees are more easily taken care of in them, and I get more honey. I place them on a platform in my garden, about two feet from the ground. Last March I lost 2 swarms; did not give them sufficient ventilation.

Cook—March was the worst month we had last year. The warm, sunny days, followed by extreme cold nights, was bad for bees. At this time the air chamber and also the air space between the comb and hive is necessary.

O. E. Thayer—I keep my bees on a platform three or four inches from the ground. Let them cover with snow in winter, but when covered should have ventilation in top of hive. I would like to ask Mr. Munger why he raises his hive so high—two feet.

Munger—To keep the rain from spattering the hive.

Thayer—I like Beebe's hive the best of any that I have ever used. I place each hive on a plank separate.

Cook—We should always go behind the hive to work with them; never stand in front of them.

J. S. Thompson, Hamburg, Erie Co., N. Y.—Have experimented upon the best mode of wintering bees a good deal. I find no better way than out of doors; cellars and bee houses won't do. In answer to questions, Mr. L. remarked, that a swarm ought to weigh in the fall from 32 to 85 lbs. to winter. If lighter, must be fed, and the sooner they are fed the better, to give them time to cap over the cells. He gave as one cause of disease among bees in winter, that the moisture given off in the breath of the bee is condensed by coming in contact with the colder comb and sides of the hive, and the hive becomes wet and unhealthy. Have had trouble with foul brood among my bees. Think this disease, when once started, very contagious. Can be carried in the honey, if they rob. It is caused in different ways—poor hives, water gets into the brood. The first I had among mine, my hives got displaced by a whirlwind, tipped over, comb in some instances emptied upon the ground. I replaced them as well as I could. Some of the brood I also attempted to replace, but it had become so much injured that foul brood soon made its appearance. This disease followed my bees for a number of years. I tried many ways to prevent it, but none succeeded better than to take out all the pollen and brood in May or June. If a swarm is attacked a second time, take all out again. The cause of dysentery is too much ventilation.

Beebe—Quinby says that cutting out won't cure, and that honey will carry foul brood.

An old gentleman here remarked that he had come a long way to ask the convention one question—"How can I winter bees without losing swarms?"

Beebe—That's just what's the matter. That's what the doctor wants to know. (Laughter.) I have been engaged in bee-keeping for 16 years. Have tried a great many plans. Have tried the

cellar; it won't do. Once built a bee house, but soon became satisfied that they are far from fulfilling the requirements of bees. Have tried all kind of hives, but found none that seemed to furnish all the necessary conditions with which bees must be surrounded to gather most honey, and also to preserve them through the winter. He then exhibited a hive which he had invented and used, and known as the Beebe hive.

The question was then taken up, "Is a young queen suitable to raise queens from? Will her daughters be hardy and prolific?"

Mr. Beebe being called on, said that he had raised such queens that were "hardy and prolific."

Cook—I agree with Mr. Beebe. I can conceive of no reason why they should not be so.

Wood—Has such a queen (Italian); has raised four swarms this year from her—good ones.

Whitaker—I think such queens as good, or better, than others.

Mr. Cook explained his method of artificial swarming. His hives consist of two square hives, one above the other. He drives the queen to the upper hive with smoke, and then removes the hive containing her to another stand, and allows the lower hive to raise them a queen from the brood cells already furnished. The advantage claimed by thus dividing the swarms, instead of allowing them to "swarm" naturally, is that you loose none by running away. I have 80 swarms; with their swarming, one would have his hands full.

Beebe—From 5th to 10th of June, when clover is best for honey, I take three cards from centre of hive; put new hive on old stand. The workers that are about will come back to old stand. In sixteen days the swarm will have a new queen. To give an old stock a queen, cut out a queen cell with a square inch of comb, and place it in the comb of the swarm you wish to give a queen. In answer to questions, he added that an egg laid in a drone cell would never produce a queen or a worker—that drones were male bees; queens were the perfect female bees, and workers were undeveloped females. One impregnation of a queen lasts for a lifetime, proved by a pure Italian being sent off, will produce Italians during her lifetime. The average life of a queen is three to four years, workers about ninety days. Their wings often wear out. Have often seen holes in their wings.

The question of "feeding bees" next called up.

Cook—If bees have not honey enough, should be fed at once. Let them have time to cap over the cells. Take coffee sugar, add water, melt and skim. Sometimes add finely ground slippery elm; also glycerine oil to prevent crystallization. Swarms eat twenty pounds of honey in a winter.

Beebe—Never feed in winter—makes bees uneasy—but a little in spring. I give you my rule for preparing bee feed: Best A coffee sugar, 10 pounds; water 5 pounds; boil five to ten minutes, skim. In fall must be a little thicker than spring.

Mr. Beebe, in answer to questions, said that it

costs bees as much labor to gather 1 pound of comb as 20 pounds of honey. He thought good, clean, white comb worth \$5 per pound. Keep it till next year. If you have swarms to feed, do it now. In movable comb hives, I can take from the rich swarms and give to the poor ones easily. I think a natural swarm will make more honey than an artificial one. I have another way to make a swarm move a hive in middle of day: Put a hive in its place. In it confine a queen twenty-four hours; the workers will come in and form a new swarm.

Munger—Last spring I noticed among my bees a swarm of mixed Italians. This season they have put out three new swarms. There are no Italians kept nearer than Casadaga, that I know of, which is about four miles from my house in a straight line. Do they ever mix so far as that?

Beebe—Bees can mix a distance of about three miles. They each go about three miles. The meeting of the queens and drones takes place in the air, and if they do not have their liberty, will not mate. The queen will continue to produce half-bred Italians as long as she lives. My Italians have sometimes been seen four miles from home.

Cook—I have known them to mix a distance of four to five miles in Ellington.

Upon the subject, "What is the best plan for introducing queens?" O. E. Thayer remarked that he had taken the black queen away twenty-six hours, then with honey from this hive covered the Italian queen, and dropped her in. A safe way, however, he said, was to place her in a cage made of wire gauze 1-16 inch meshes, and leave her in the hive till they get acquainted; they are surer to accept her.

Beebe gave his plan of doubling up swarms. Sprinkle both swarms with sweetened water, with a little peppermint essence added, and put them together. They will not fight, but will become one swarm. In his experience in shipping honey, he had found the crop from Chautauqua as good as any that goes to market from any locality. Bees in this county derive their honey principally from basswood, white clover, red raspberry blows, yellow rod, or yellow weed and corn.

Oliver Waterman, Stockton—Last fall I had twenty-four swarms lost, fifteen with dysentery—eight new ones, twenty on hand—have 60 pounds surplus honey—swarms all in good condition but two, must feed them. Always feed a little in spring. Winter on summer stands. I had three acres of sowed corn this year, my bees worked on it a great deal in August and first of September.

Motion was carried to re-install the officers of last year for another term.

Next semi-annual meeting to be held in Fredonia, 3d Tuesday in April next.

Next annual meeting to be held at time and place of next Chautauqua county fair, on the second day of fair.

Mr. Beebe will prepare two series of questions for discussion, to be published in the ADVERTISER AND UNION for next meeting.

[For the American Bee Journal.]

Imprudence of Beekeepers.

In an article in the Bee Journal for July No., "Headed Imprudence of Bee-keeping," we find remarks that we take exceptions too. At first, we thought that the writer had written in that style for a sort of burlesque. But as we always take the side that we think is right, never leaving it for argument sake, thinking if we did so, that our influence might go in the wrong direction.

So we have undertaken to try and correct the gentleman, or some of his readers, in relation to the "Imprudence of Bee-keepers." (We think that beekeeper might be substituted.)

To investigate this subject properly, we must go back to primitive beekeeping, when the "Old Box Hive" was all that was thought necessary. When the "King Bee" ruled supreme, and the music of "Tin Pans" charmed the forthcoming swarm to listening quiet on some old "Mullain Stalk," when a man would never dare sell a "Gum," for fear of losing his luck, and must of a necessity steal one to start successfully. (That reminds us of our having one stole this summer, but somehow he did not have the luck to keep it.) At that time, would our "Imprudent Beekeeping Writer" been successful in "hiding his light" under a box hive.

In those times, beekeepers had to kill their bees to get of them. (How different from last winter.) Some persons are somewhat Rip Van Winkle in their ideas, and give their views accordingly. Our friend does not tell us how we should do to be prudent; therefore, we must suppose that we must do directly opposite, from an imprudent one. To do this, every one must form himself into a secret society, and keep what little he knows locked up for safe keeping.

Compare the results of such a course with the beekeeping of the present day, it needs no argument to any one, who believes in progression, and those who do not, will go back where they need not fear "Competition."

Mr. Editor, Your correspondent seems to blame those who let their "light shine;" supposing a part is gas light, yet it helps to find the path of truth. We should be as willing to learn others, as we are to learn of others.

Mr. Greene is afraid of overstocking the country with "Beekeepers," the cause of which he gives by the many giving their experience, etc., causing "Multitudes to come over." In this he mistakes human nature. Let one beekeeper in each neighborhood be successful, and yet be on the "sly," and he will make two converts where he would make one, by trying to induce others to join in the business.

He says, "Suppose fellow Beekeepers, that our numbers increased for the next ten or fifteen years, as they have for the last two years. 'Where will be our market,' yes, and suppose that a majority of them do all in their power to make converts by putting their 'Exaggerated notes' into our journal, and pay their subscription too as they should. We think Mr. Editor,

your acknowledgment list would show a different footing.

What if we should produce honey enough to ruin the South and Indies, by superseding the sugar cane, what if France had to go back on her sugar beet, and sugar maple become a staple article of fire wood, would not the world be the better for it, should we not save something that is now wasted.

We have no statistics at hand to show our increase for the past two years, but we will venture to assert, that our numbers have not quadrupled, nor even doubled, but we will suppose that we doubled every year, at the end of fifteen years, we would not then overstock the market, but we believe that honey would be in better demand and at better prices than at present.

To accomplish this, we will reduce the price at first, and enable it to be introduced into every household. It will then become a staple article.

Cheese is not a necessary, but it has become a staple article, and its price has doubled in consequence.

At present, there are but few who supply their table with honey every day, but those who do, will testify, that it is the cheapest, and best sauce, that can be had for the money. On the other hand, those who have it now and then, find its taste so palatable, that they forget while eating, that it costs money, but are reminded of it after finding how much they have eaten, and cannot afford it at such prices.

But every one is not going to keep bees, be it ever so remunerative. Some are too careless to succeed, others too careful of their feelings to be imposed upon by the imposing things. Some do not know enough, others do not care to know, while others know too much; it is often the case when asked to subscribe for the journal, they will say, "I know more now than I practice," Ignorance and prejudice are the real Moth and Foulbrood of the apiary.

Now as to overstocking the country with bees, we "can't" see it, for several reasons. First, if we gain for the next five years as we have for the past two years, we will have to figure thus: 100—50 per cent, for winter killing \times 5 per cent., for swarms + 15 years, and we can see where we will stand.

Next if we overstock the market with honey, we cannot increase in swarms, then our comb must be built, and it all takes honey and vice versa. The demand will increase the supply of pasturage. Clover must take the place of thistles quack grass, etc., basswood groves will resuscitate worn out lands, and help to keep our water wheels in motion, by an increase of moisture, the locust will help to build our fences. Fruit large and small might overstock the market, promote health, and beautify, and adorn our honey. With buckwheat we can subsoil, and with buckwheat cakes we can manage a little candid honey on a winter's morning.

By using the extractor in the proper season, we can enable the bees to double the quantity gathered.

In our own State, "Minnesota," where there is basswood, we are confident that a thousand colonies can be kept where only one is now kept.

Sufficient unto the day is the evil thereof. Don't let us stop our journal, nor let our Bee Conventions go by. But rather make two blades of grass grow, where only one grew before.

SESEAYE.

The B. S. Hive, and more about wintering bees.

MR. EDITOR: My attention has just been called to the article on page 74 (Oct. No.) of the Journal, from the pen of "Novice." Had a friend not written me in regard to it, I probably would have remained in blissful ignorance of such an article or that certain part of it relating to the Bay State hive.

It seems that a friend of Novice has one of the B. S. Hives in use that has not yielded any income to its owner for two seasons, but he does say that this stock of bees in this hive "was one of more than average strength," a fact going to show that it was the owner and not the hive that was in the fault. Let this be as it may, are not there hundreds of all kind of hives in the same fix all over the United States? And the fact that this one hive gave no surplus or swarms proves nothing, and no fair minded beekeeper will consider it a test, and I am surprised that "Novice" should select one hive and with the intention of having the readers of the Journal understand that that one hive is a sample of what the B. S. Hives are doing throughout the country as a general thing.

Have those who have given their experience through the Journal of the B. S. Hive made wrong statements, and I think not, their word so far as known is as good as that of "Novice's." I have letters received from persons, this fall, using the B. S. hive, who say that all the honey they have obtained was taken from the Bay State hive, and I ask those same persons to send the same statements to the Journal that they sent me—there are thousands of hives, and "Novice's" favorite among them, that gave no surplus this nor last season, and Novice knows it as well as I do.

Had Novice six or more of the B. S. hives in use, with good stocks, all in good condition and four out of the lot failed to do anything, as did his friends, there might have been some reason for saying what Novice did on page 74.—The fact that "Novice" has none of them in use, and there is only one in his vicinity that he knows anything about, we hope, that his experience with that one may turn out to be worth no more to the public than his method for feeding sugar syrup to bees—I did not read that article, but I did read the one on page 91, (Oct No.) from the pen of one who "spent the greater part of his life in the confectionery business." However, Novice has a good way of getting over such mistakes, and I have no doubt he will get over this one all right.

About the frames being too large in the B. S. hive, I will just remind the reader that those "large frames" are smaller than those used by Novice in his Langstroth hive, and will also say, that the frame I now use in the B. S. Hive, are not so large or deep as those in the hive

Novice speaks of. I have just the best frame for the honey extractor that can be got up.

So long as "Novice" has the L. hive "on the brain" it can't be expected that he will speak well of any other kind, but the readers of the American Bee Journal know that there has been a great deal said against his favorite hive—as well as much in its favor—in fact most all prominent hives have had more or less said in their favor as well as against them.—When a beekeeper has a hive that suits him he knows it, and he don't ask any one to tell him of it.

But the idea that too much has been said in favor of the B. S. Hive because one and only one that Novice knows anything about has not done well, should not have much weight as it proves nothing.

The American hive has very often got a "rap across the knuckles" from Novice, but those who have read the Journal for the past four years know well that there has been a great deal said in its favor.—I never had a good opinion of that hive, but I know from my correspondence, that there are thousands of them in use, and probably as many as of any patent hive invented. When we all think alike, then it will be easy enough to name the best hive, and not till then.

MORE ABOUT FEEDING AND WINTERING.

If those who fear that the sugar syrup feed to bees will crystallize, will add one pound of honey to ten pounds of syrup, they will have no trouble. I will guarantee but I never found any trouble when prepared by the directions I gave in the Oct. No. of American Bee Journal. I have fed a number of stocks entirely with sugar syrup.—All hives that have straight combs should have winter passages made through them. I make them in this way. Bore an inch hole in the side of the hive, not quite half way down, then take a stick three-quarters of an inch square, long enough to go through all the combs, make one end sharp, and slowly work it through the combs to the opposite side of the hive, the bees will soon clean up the honey that runs, and leave a very clean round hole to pass through during the winter. This should be done on some warm day in October or November, when the bees can move out of the way of the stick. I have practiced this way for ten years and never have killed a queen or any bees in the operation. I have used a honey board made of corn-cobs, but prefer one made of woollen cloth when they can be had,—make a frame similar to a window-sash the size of the honey board and nail the cloth to it, then place it over the frames,—upward ventilations should be given, by making a few, (say 2) inch holes in the cap one front and one rear.

I shall winter all my bees on their summer stands, and I shall protect them from the cold north winds by a high board fence.

I am satisfied that bees winter better on the summer stands when protected as above, than they will in cellars, sometimes they winter well in cellars but not well enough to pay for the trouble of putting them in and taking them out, Mr. Eliphalet Eames of So. Framingham, Mass., put twenty stocks in the cellar and left twenty

on the summer stands, those in the cellar came out in the best of order, they could not have wintered better anywhere. I was at his place in the June after, when the bees were at work and I could not pick out those wintered in the cellar from those wintered out in the air, in fact they were all good stocks, and Mr. E. was of the opinion that it did not pay to put them in the cellar.

This rather conflicts with what has been said in the Journal, but the reader can take it for what it is worth.

H. ALLEY,

Wenham, Mass., Oct., 1872.

[For the American Bee Journal.]

In the Apiary—July 4th.

Who that cares to read the "Journal" would not find more music in the murmur of a hundred hives, than in the discharge of fire crackers and small canon. My patriotism is not noisy, and a well conducted apiary affords the best illustration of liberty without license that I know. Listen to these bees! For the last ten days, they have been holding high carnival among the lindens, and they sing out of pure joy at so much prosperity.

Golden belten Italians building straight combs in Langstroth hives, and filling the most exact and artistic of section boxes with sheets of the whitest honey. That I should call working within constitutional limits.

These hives, by the way, are in Lewiston, Ill., and are the property of Mr. Rufus Porter—an attentive reader of the "Bee Journal," as of all other journals upon the subject, and an independent thinker, who experiments and decides for himself.

The two hundred hives composing his apiary are about equally divided into two portions, five miles apart. Last year commencing with half this number, he realized seven thousand pounds of surplus honey—a fair result for a very dry season.

But these items are notes by the way only introducing the subject upon which I want a little light. Yesterday, I accompanied Mr. Porter in his walk among the bees storing up hints and suggestions for my own future use, as I watched the management of honey-boxes, liberation of queens, &c. Among the hives examined, were several containing queens imported from Roveredo, Canton, Grien, Italian Switzerland. Edward Uhl, director, through the agency of Geo. Neighbor & Sons, London—as per advertisement in various numbers of the Journal for 1871. These queens were introduced in October, and gave satisfaction up to the present time, when bees, nearly black, are becoming quite numerous in their colonies. There are no one or two banded bees, but the stocks are made of distinctly marked Italians, with an intermixture of these black bees, some of them reveal upon close examination, bands of a dark copper shade. Now what does this change of color signify? Are the queens sent out by Edward Uhl of

Roveredo, really pure Italians or have these queens never breathed Roveredo air? Will not Mr. Adam Grimm or some one else, who has experience upon this subject, oblige us with some information through the Journal.

C. S. ROGERS,

Elmwood, Ill., July 13, 1872.

[For the American Bee Journal.]

Varieties.

MR. EDITOR:—I presume that the numerous readers of your Journal think that all prominent bee men should find time to write at least once a month for the Journal. So I thought. But about all the leisure I could boast of the last three months is eight hours to sleep and rest my weary limbs, excepting, of course, the Sabbath, and I won't desecrate that day writing.

I promised in the August number, page 89, to tell you whether the *only* queen I had tried to fertilize in confinement, having a defective wing, had met a drone. No, she did not. Her brood was drone brood. WAIT tells us he does succeed. We'll let him demonstrate it to us by taking up Friend Furman, who, without doubt, made the proposition in real earnest. I did not write that piece with a view to discourage any one. No, I would say go on and try all you can, for bigger men than I say you will succeed, and I hope that you will; but I will not risk the life of another queen in the attempt until I see it proven a perfect success.

Friend Birch, in present number, page 68, seems to differ with me on the above, but he does not, for I did not say the thing was impossible, only in fertilization tents, wire cloth contrivances, &c., &c. I still repeat it.

Friend Birch also wishes to know how to increase thirty swarms to one hundred, and obtain so much honey, if the bees build their own comb. I can better answer this by referring him to reports in the past journals, how I increased thirteen swarms in 1869, to fifty-two, and a part of this thirteen in box hives. I did not say I could do it without the use of empty comb, but I think I could in a first-rate season. I had very little old or empty comb this season, and I am very much surprised that I have done so well in such a poor season. But the truth is, unless bees can gather enough to winter on this fall from fall bloom, I will be compelled to feed back as much as I took away.

I sold my strained honey at 20 cts., and if I have to feed, it will be a syrup of twelve pounds coffee (A) sugar to a gallon of water, with a little cream of tartar, and heated to a boil. This makes a better feed than honey. I have never had a dysentery stand fed this way. My thirteen stands were fed in this way in 1868, that survived the winter when all other bees around me died. Mr. Burbank, of Lexington, fed the same way at the same time, and so saved his bees. This feed is almost twice as cheap as honey, and I consider it better for wintering on. I agree with Novice that it is almost a perfect remedy against dysentery.

This time last season queens would hardly lay at all; now I would be glad to stop their profuse laying. Every stand is amazingly full of young bees. The smart weed is very thick in bloom, and bees hard at work. Weather excessively hot.

R. M. ARGO.

Lowell, Ky., Sept. 10, 1872.

[For the American Bee Journal.]

"Novice" and "The New Idea."

"Now Thomas," said the Sabbath school teacher to one of his scholars, "you have just read that Noah had three sons—Shem, Ham and Japheth; now tell me who was the father of Shem, Ham and Japheth?"

Tom scratched his head, and after studying the question, only answered, "Sir?"

"Why, Thomas! don't you know who was the father of Shem, Ham and Japheth, after what you have read?"

"No, sir—I think not."

"You certainly do know, Thomas, if you would only think. You know Mr. Jones, who lives over the street, has three sons—James, William and Henry Jones. Now, who is the father of James, William, and Henry Jones?"

"Mr. Jones," exclaimed Tom; "I guess I know that."

"Certainly, Thomas; that's right. Now this is exactly the same thing. You see, as you have been reading, that Noah had three sons—Shem, Ham and Japheth. Now you can tell me who was the father of Shem, Ham and Japheth?"

"O, certainly!" exclaimed Tom, eagerly. "Certainly, I know now; why, Mr. Jones."

Mr. Editor, don't this sound very much like the catechism that friend Gallup has been trying to put my particular friend "Novice" through? Says Novice, "Now, Mr. Gallup, are you sure there is *anything* you have been trying to get into our head after all?" Further on, he says, "In his last article we do gather this * * * * * that the queen prefers to keep her brood at the bottom of the comb in mid-summer." In other words, he knows now that Mr. Jones is the father of Noah's sons.

I did not start to argue the matter with "Novice," and I will only say that I think the difficulty with him is, that he has become so wedded to his two-story hobby, that he cannot see anything else. He cannot test the theory with that; and the very management he says he gave the Quinby hive (which does not embrace the New Idea), shows that he does not catch the idea. On page 11, *Progressive Bee Culture*, I say:

"In a hive only ten inches deep, the queen is necessarily confined to her first brood nest; for as soon as it is fully occupied and once filled, the comb all around it is filled with honey and bee bread; and if honey is very abundant in the flowers, they will soon begin to encroach on the brood-cells, filling them with honey, and to that extent extracting the queens brooding room.

"This is easily remedied, by at least once in every three weeks inserting in the centre of the brood-nest at least three empty sections (or

frames) to be filled with new comb; to make room for which the brood-chamber should be separated in the middle, and pushed apart so as to admit them. The bees will rapidly fill them with comb, and the queen will occupy it with eggs. It is better to insert one section each week, than to put in all at once; but, when time is important, they can all be given at once, each time the brood-nest is filled."

"Novice" seems not to have so managed his Quinby hive; for, if I understand him, he just let the bees alone after they were put in it. He neither took my advice, nor followed Gallup's directions, "To move the brood apart and insert one empty comb right in the centre, and keep doing so at regular intervals, as required, &c.," so as to give the queen plenty of room all the time.

Now it seems to me, that if "Novice" had read this, he "certainly" could have told who was the father of Shem, Ham and Japheth.

I have no taste for personal controversy, such as is too frequently indulged in by your correspondents, nor have I any faith in my own or anybody's infallibility. I was taught, when a boy, to try and be charitable, particularly in matters of opinion and judgment, and have always tried to act up to the maxim, "If you cannot believe yourself wrong, at least believe everybody else equally sincere, and as likely to be right as yourself." And if "Novice" really thinks that Jones is the father of Shem, Ham and Japheth, he has my hearty permission to do so.

I would not write this now, had my name been left out by "Novice," or if he had used less harsh language, in what he says of *Progressive Bee Culture*; or if, in quoting from it, he had not attributed to me what I did not say: as, for instance, he says "Mr. Adair claims, by the same New Idea, a colony can be made to gather as much honey and build the comb for it, as they would with empty combs constantly furnished them."

Mr. Adair did not say so. The book in name, as well as substance, is based on the fact that we are *progressing*, not that we are perfect, in bee-culture. On the very first page I say: "The revolution that Dzierzon initiated when he constructed the movable bars, is still going on, and will only be complete when every healthy colony of bees is made to produce the maximum yield, &c.;" and further on, in answering the question, "How is it to be accomplished?" I answer in general terms by saying, "By a thorough understanding of the laws governing the actions of the honey-bee, and the adoption of such intelligent management as shall take advantage of those laws, &c."

The part he attempted to quote, I will copy in full from page 5:

"A perfectly balanced normal colony of bees consists only of a queen and workers; and so long as that balance is maintained, there is no necessity for any other members being added. Another fact of great importance is, that so long as the balance is perfect, no drone comb will be constructed by the bees, nor will any queen-cells be commenced. And we venture to assert

another fact, *that in such a colony* the bees can generate wax and construct comb as rapidly as is needed for the brooding of the queen and the storing of honey. *With our present knowledge of the habits and instincts of the bees, we admit that such perfection is seldom reached in the management of bees; but we are sanguine in the belief that it can be attained. To do so, will require that we should be thoroughly, intimately and correctly informed of the natural laws governing all the operations of the hive, and of the offices performed by all its inmates.*"

Is "Novice" so thoroughly versed in bee-culture, so perfect in his management, as to be able to say that this is "error," or is such "a strong, positive, or harsh statement," that he, or others, can see the "fallacy of it at once?" Does he think he or any one has attained perfection? It would seem that he thinks so, or he would not make such a statement as the following:—"Our soundest thinkers have no time to theorize and argue the matter."

Is that so? Have not all the advancements that have been made in bee culture, as well as in the sciences generally, been made by men who took the time to "theorize and argue?" Did not Dzierzon both theorize and argue the matter when he framed his "Theory," that is the basis of "Novice's" success? Did not Huber and Langstroth use their powerful brains in "theorizing" and arguing the matter, or did they instinctively stumble on their great discoveries? Did Houska set the centrifugal force to expelling the honey from the comb without theorizing and arguing?

Why, Mr. Editor, our "soundest thinkers" are those who look for progress in everything. A man who sets himself up as "Sir Oracle," and says, "you can go no further," is, in my opinion, no "sound thinker." Nothing is perfect yet. The medical man who should content himself with what he learned from books ten years ago, would soon be without intelligent patients; and such a lawyer would have few clients. Chemistry, astronomy, meteorology, and all the physical sciences are continually unfolding new facts; and bee-culture, which has but lately made any advances at all, has not near attained its perfection.

"Novice" is the last man I should have suspected of such sentiments, and I cannot believe now that he is such an old fogey. The truth is, that Gallup had him a little worried, and he forgot himself. If he could only get that two-story concern out of his head, there would be plenty of room for the "New Idea."

Since writing the foregoing, I have received your September number, and must thank "Novice" for what he says so kindly of me; but think it unkind in him to say of *Progressive Bee Culture* that "It is so much an advertisement of a patent hive, that it seems it should be furnished gratuitously, as should all books, in our opinion, that are written in the interest of any patented articles." In answer to this, I wish to say that the book is not, strictly speaking, written as an advertisement of my patented hive, as the theory advanced therein is a general one, and, as stated in it, can be applied to the Lang-

stroth, or similar hives. In fact, Mr. Gallup had arrived at similar results and conclusions by using a different hive. For further answer, I would ask him whether he knows of a book on bee-culture that does not advocate the use of some particular "patent hive," from Langstroth to the smallest pamphlet that has been published, unless it be Mr. Quinby's, which, while disclaiming any patent, is, when judged by "Novice's" rule, "an advertisement" for the Quinby non-patented hive, which he manufactures and sells. Mr. Langstroth's book, which "Novice" assists so much in selling, is, from beginning to end, in that sense nothing but a big advertisement, for pages of it are devoted to showing its superiority, and thirty cuts (more than one-third of all the book contains), are in illustration of his hive; and, to come nearer home, let "Novice" read his own articles in your Journal, and he will see that nearly every one of them is an advertisement of a hive, on the frames of which, he has lately taken out a patent for an improvement; if it is not, it is a puff of that "tea kettle feeder" of his which he proposes to sell for \$1; or is to tell about that "quilt" he has invented, which he will probably patent, and advertise in the next number of the Journal.

While this is a "positive," I hope "Novice" will not consider that I intend it for a "harsh statement;" for the hive is so intimately connected with the management of bees, that it would be almost impossible to treat on many points connected with it, without showing a preference for some form of hive.

D. L. ADAMS.

Hawesville, Ky.

[For the American Bee Journal.]

How to have Straight Combs.

In the October No. of the Journal "B" inquires how he can "have combs built straight, so that the frames can be readily removed from the hive." I will state how I accomplished that result, and if "B." will follow the same plan, he will have no more trouble with crooked combs. With a rip-saw I cut thin strips from common pine laths, such as the plasterers use. I lay these down on a work bench, and holding them, with one hand dress them smooth with a smoothing plane. I now have strips about $\frac{3}{4}$ of an inch wide by $\frac{1}{4}$ of an inch thick. I cut them the proper length for comb guides, pierce them with a small bradawl, and, using $\frac{3}{4}$ inch brads, fasten them to the under side of the top bars of the frame. Of course one edge is down; and the bees must be very perverse, and very persevering in their perversity, if they deviate from the guides. By using the same kind of guide on the side bars of the frame, assurance will be made doubly sure. With this comb guide, it is not necessary to elevate the rear of the hive. Until the past season, I used the triangular comb guide, but it did not work satisfactorily. The bees would leave the edges, and run the centre of the combs, in some cases, along one

side; but since I adopted the above described device, I have not had one crooked comb built. It has the merit of being easily made and put on, and the greater merit of being invariably successful.

Generally, I do not put guides on the side bars, as the bees are not apt to build combs crooked, if they get started straight; but the guides on the sides of the frame aid in holding the combs in their places while they are being handled, as the bees build over the guide, so that it fits into the comb as a tongue into a groove. Guides on the side bars should not be quite as wide as on the top bars.

M. MALIM.

New Castle, Henry Co., Indiana.

Letter from Kansas.

EDITOR JOURNAL:—We have seen nothing in the Journal from Kansas for a long time. It is probably unfortunate for the bee interests of our State that we have no *Novice* or *Gallup* to keep the bee-keeping fraternity informed that there is such a place.

In attending several fairs this fall, we had opportunity to gather some information in the bee line. We found that, excepting a few localities, this has been a very poor honey season, although bees have generally enough to winter on. In some localities a surplus was reported. We found quite an interest being awakened in bee-keeping. Even more than we expected. Mrs. Tupper's example will be followed by a good many women of Kansas. We saw several at our State Fair that said they cared nothing for a bee sting. When you meet such a person, whether male or female, if they will put their attention to the business, they will succeed. But where you meet a person that lives in mortal dread of a bee sting, it will do to advise them to try some other occupation.

At our late State Fair we had a separate class for things in the bee business. This was secured by a committee appointed by the Douglas County Beekeeper's Association.

This brought out quite a display in the bee-keeper's line. Many were astonished at seeing so much honey, and wanted to know if it was all made in Kansas. But the wonder of all was the honey extractor. The crowd was not able to determine whether it was a churn or washing machine, and as it is allowable for to mention in the Journal meritorious articles, we would say right here that we had on exhibition a honey extractor of our own make that is far ahead of anything that we have seen or heard of in that line. As a matter of economy, we thought it best to send in this notice ourselves, rather than to give some one an extractor to make it for us. The superiority of our machine is that it will sell readily for churn, bee-hive, washing machine, and machine for taking hairs out of butter. When it has proved to work well for all those purposes, we intend to get it patented, we will have the hole that the honey runs out patented, and if that has already been patented, we will

have a combination of two holes, and possibly three. Now there need no one send a dollar for a description, as we cannot spend our time in writing descriptions. But when we get a patent, then we will have *valuable territory for sale*. But to tell the whole story, our wonderful machine did not take the premium. The reason was that we did not have the selecting of the awarding committee. That makes a "right smart" difference you know. We afterwards exhibited our extractor at a prominent fair in Missouri. Here the officers promised us practical bee men for committee. And here, what do you think, after examining three extractors and a two-story Twining bee-hive (which had by some mistake been entered as an extractor), the blue ribbon was tied to the hive as the best extractor. Here again, you see that it is all in the make of the committee. Poor Twining never dreamed of his hive being the best honey extractor, and labored while he lived to make people believe it the best moth trap in existence. But as he has now gone to his "long home," I would be out of place to mention his faults.

We now come to the last patent on bee-hives, a Kansas inventor has the honor. F. Grabbee, of North Topeka, has secured letters patent on what he calls "the Kansas bee-hive." Now, as this inventor intends to push things, it might be well to let the beekeepers of the country know something about this new candidate for public favor. As for myself, we do not regard the patent as much of a "Grab." This Kansas hive is on the style of the Thomas hive, set up on the corner. It is a four side opener, this will certainly meet the requirements of the most fastidious side-opener advocate. The patentee thinks it a "big thing." The hive can be opened as easy as the peel can be taken off an orange, one quarter section at a time. But the patented feature is the most curious. He first applied for a three side opener, but was refused because it infringed on other patents. Then he makes application for a four side opener and obtained a patent, so it turns out that he has a patent on what he considered himself an unnecessary addition. The question is now who wants the quadruple side-opener patent? Only five dollars for farm-right, don't all speak at once; be sure and have the four sides to open, or you will not get the worth of your money. Now, Mr. Editor and beekeepers, we have not been bribed to give this notice of the Kansas hive.

At our State Fair there was one D. R. Reid, one of those wisecracks in the mysteries of bees, that seems to have inherited the wonderful six secrets of the *lamented* Twining. He seems to have made a great improvement on the Twining hive, and *daubed* it with a new name, "Common Sense Hive." We saw a notice in the Journal that this same man was at the Iowa State Fair last year. We were glad to see there was not as many fools to be caught as formerly. This man Reid is not very dangerous, his shallow pretensions show at once that he knows nothing practically of bee-culture, and although he manages to carry a few bees in his hat, he stands trembling in his boots lest the bees make a raid on his physiognomy.

Kansas State Beekeepers Association held a special meeting during our State Fair. At this meeting there was a committee of three appointed to confer with the State Board of Agriculture with a view of securing larger premiums and more space for exhibition at the next fair. There was also a resolution passed instructing our Congressmen to oppose, if necessary, any further extension of the Langstroth patent. The reason for this action was that Mr. L. had enjoyed his patent for the full limit of the law, and that the best territory for his patent was now owned by other parties, it would be giving them a privilege and a right for which they had never paid, and thereby work an injustice to the beekeepers of the country.*

NOAH CAMERON.

Lawrence, Kan., October 28, 1872.

* The Beekeepers Association of Kansas labor under a mistake as to the property of Mr. Langstroth's patent, in case he should apply to Congress for an extension, and the same should be granted to him, that extension will return to his hands the entire patent, and, of course, all the territory.—ED.

Novice.

DEAR BEE JOURNAL:—The question has been asked why we in September number made such an attack on Mr. Alley and the Bay State hive, without provocation.

We should be very sorry, indeed, to have it appear that we ever in these pages attacked any hive, or any person, because they had displeased us; on the contrary, we have tried to keep steadily before us the good of the people in regard to improved bee-culture, and what we have said of "Bay State hive," "Eureka hive," "Thomas hive," "American hive," and even the "Quinby hive," and in short all hives that are prominently before the public (we beg pardon, we had almost forgotten friends Gallup and Adair in our enumeration), was not that we wished to injure their owners, but that we wished to add our mite of experience to the general fund, whether it favors any particular individual or not. We have had many letters making inquiries in regard to the Bay State hive, as, in fact, we have relating to most of the others mentioned above, and to save writing to so many, we give our views in the journal. Those of our readers who may care to, we ask to see pages 252 and 253, Vol. VI., of this Journal, and others, that leaves the impression very strong that the hive always gives a good quantity of surplus honey.

Now such is far from the case in our locality; for seasons in which bees work in boxes are the exceptions, and "poor seasons and no profits the rule."

In our opinion, every colony should yield at least fifty pounds surplus the worst season, and this can only be done with the extractor.

As to whether the Alley hive is adapted to the use of the extractor, we will leave the question to be answered by those using them. Most bee-

keepers can judge from an inspection of the frame on page 252, as above.

Were box honey our sole reliance, we really fear that the masses would abandon the pursuit in disgust, as they did ten years ago, and seem to have a strong disposition to do now. See last two or three numbers of Journal. *Give us facts from experience*, however stubborn they may be.

To conclude, whenever the large liberty our editor so generously allows, is made use of to extol patent hives, and to lead "unsuspecting novices" to infer that their piles of honey boxes are always filled, and that the bright results narrated by them or their friends are the rule and not exceptions, why shall not we give the other side of the picture, and tell how we have paid large prices for such hives, and watched in vain for a hundred pounds or more of box honey?

Did any one ever hear of these "individual and township rights men" telling you that very often the bees would refuse to work in the "cunning" boxes in spite of guide combs, etc.?

If it were worth while, we think, a report of failures could be called forth from the silent and suffering masses, that would show far differently from the testimonials we have presented us.

If any of "our wares," no matter where recommended, fail to answer the purpose, give us the results by all means. Let each and every one do all in his power to enable us to see each article recommended in bee-culture on all sides, weak points and all, so that we may avoid disappointment.

How many of us are there who have not paid out more cash in the pursuit of bee-culture than has ever been received?

So many that we fear this state of things cannot last long unless there be a change, and so we come back to our subject that we had intended to write on, viz.:

How to start an apiary and manage it with the smallest amount of capital, (*hard cash*) employed, and yet to have it yield a sure, permanent profit (*hard cash again*) all kinds of seasons, and with the least amount of labor of brain and muscles (which should amount to the same thing *cash*, or its equivalent).

With the above heading steadily in view, we propose to write for the coming year of 1873, never deviating, unless it be for the general good of fellow beekeepers; and in all cases it is our express wish that the editor correct us whenever he may think us at fault.

Our wholesale feeding was a success thus far. We arranged a waxed barrel of syrup, with a broad, flat tin tube attached to the bung, then the barrel was inverted at such a height as to allow the tube to pass in at the back of a two-story hive (of full blood Italians,) just between the upper and lower frames.

The lower side of this tube was made of perforated tin, and so we had a "barrel-teakettle feeder;" and the Italians did put the whole barrel of syrup in combs.

They also built some beautiful white comb and filled it with syrup; but it was syrup still and not honey, of course.

We think they were nearly two weeks in using

it all, raised lots of brood, and a host of drones, which we have now (November 1st) in a queenless colony, with a young unfertile queen ten days old.

We will report next month if she becomes fertile.

If the experiment is worth anything to queen raisers, they are welcome to it. An empty story *vaxed* with float, was kept underneath the two story with combs, in case of accident.

The only objection that we found, was the slight one of robbers, for not even an Italian stock seemed very prompt to repel them, when their supply inside seemed so exhaustless.

Of course combs were removed as soon as filled. We are now preparing to put our bees into winter quarters, and would like to ask some of the writers who seem to still keep hazarding conjectures of such length as to what may be the probable cause of bee dysentery, whether they ever knew of dysentery when bees were wintered on sugar syrup.

By consulting the back numbers of this Journal, a large number of cases can be found bearing directly on the point.

Once more we insist, "bees wintered on their natural stores sometimes have dysentery."

"Bees wintered on pure sugar syrup NEVER DO."

And dear readers when your bees the coming winter begin to show traces of the disease, remove them to a warm room, take away their combs entirely, give them clean dry ones, and feed sugar syrup, and they will speedily be well "says"

NOVICE.

P. S.—The Murphy improved extractor advertised in this Journal has a stationary can, and deserves the credit of being *so far* a step in the right direction.

P. S. No. 2.—We would add that in all our various experiments in feeding, we have never been able to get the bees to take food with that avidity that they do in the open air.

The "teakettle" comes nearest it, and Italians far outstrip the natives, but after storing twenty-five or fifty pounds, if a new set of combs be given them, they are much slower in filling them, and seem to prefer a turn in the open air to indoors work.

Full blood Italians in warm weather, will frequently take down twenty-five or thirty pounds in half a day, but hybrids and natives sometimes require a day or more.

To sum up, we now regard teakettle feeding as the quickest and most economical plan of any yet devised.

[For the American Bee Journal.]

Bees at Kleinburg.

MR. EDITOR:—The honey season for '72 is done some time since, and proved a very poor one for the bees that come through the winter. I lost all that I left on the summer stands, and every one well boxed up, but the cause of my loss being that they were, the most of the number, too weak. I didn't examine very closely, only went

by the weight, principally; that, I never do again; in future, I will not winter any more outside, without I know that they are very strong. Six very weak ones, not one-quarter of a stock, I took into the cellar; the best out of the six, upon which I counted to come through the winter, if any would, died, and I believe now that it was the cause of the honey they wintered on, gathered 13 pounds the first week in September, whether from honey dew, or not, I cannot say, but had all well sealed over. I removed them to the cellar the 10th of November, before we had any hard freezing weather, and were all nice and dry, when in December, I went looking over them, I found them all apparently doing well, but this one, which in the short space of a month had already about a quart of dead bees, but not a particle of sign of dysentery, no bad smell about them; I had them ventilated the same as the others, no dampness about whatever; they kept dwindling away in that proportion till February, when only about a pint of them were alive; then they began to be noisy and showed signs of dysentery, and in two days every one of the bees of this stock were gone the way of all *beeing*. Now, you, or some others will say, they must have been all old bees. Not at all; for I formed it the 5th of August, being a very strong stock, having brood to the fullest extent, and moved it to a new stand and gave them a young fertile queen, and kept them breeding till late in September. The other five were made the same way, only I took four frames of brood and bees adhering to it, and gave them a fertile young queen, and two out of the five were, made by simply dividing combs and bees of a not very strong stock, and the last named two came out the best, and proved my best all summer, and when putting them in the cellar, I didn't think they would live through half the winter, and so spring found me with five stocks that would scarcely have made a decent one, and they only began to breed the first week in April. The cause of this late commencement of brooding, I believe was in having ventilated too freely; I had the whole front entrance open one inch high, twelve long, two one inch holes bored in the rear, and honey board half inch raised. The winter before last I had one stock formed in the same way, and no stronger than the weakest of any of these six, but the ventilation (the temperature in my cellar ranged all winter from 41 to 44) on the top being only $\frac{1}{2}$ of an inch raised instead of $\frac{3}{4}$ inch, and they came not only through with as many bees as I put away, but double as strong. The first week in March, '71, they had their first flight, and I found them having three cards of brood; with this one I made my experiment, and found to work so well, hence, I concluded to make my increase in that way last year, and I have done so this year again, but this year I have them all strong; yet, not so strong that I would venture on their summer stands, but for the place (cellar) I mean to keep them, and the advantage in making stocks this way, is that I can keep my stocks strong through the honey season, and when the best is over, divide them, but I will not advise doing in that way and time dividing, unless one can pro-

vide a frost proof reservoir. I have this year found it to be a very poor season for honey in the early part; my bees have just gathered enough to keep up breeding, there being no white clover, and the bees had to wait till bass-wood, that scarcely ever failing resource, came in, which began about the 11th of July, when I began to have pleasure, to not see 1872, upon which I calculated to make ———, well, excuse me, I will not say if how much, but just having resolved to be satisfied with any or nothing, I could scarcely arouse myself quick enough to the apprehension of a stream (not the Mexican gulf), but a stream of honey; for such a bustle, the bees forgetting all about to be civilly going and coming, as I was seeing them all summer long, but not so now, for those coming out, appear so light that you would scarcely have time to notice it at all, and those going in, and that speedy too, I can assure you, but they being twice the size. Seeing that there is some such difference, going in large and coming out small, there must assuredly something have been left in their domicile, and I was not disappointed about it neither, for every three days my slinger had to do business; but from beginning to end, say from the 11th to the 21st, with fine clear weather, this great flow lasted, and the result per stock is, as near as I can make it, of 90 pounds from some, and 120 each, from one black and one Italian, the last two named being by far the strongest—making the total, 500 pounds of excellent honey, besides, increased my stocks to thirteen. Now, this may be a comparatively small affair, but I am well satisfied, for I think I have made far more than I expected, notwithstanding the great things we will have this year, so we dreamed last year; but, now, instead of waxing hot for next year, if Providence should spare our life and the bees, I am only thinking that there will be no honey at all. This year I have been able to demonstrate to my neighbors (old foggy beekeepers) that bee on the brain is not such conceited humbug after all, for I don't know of scarcely one that has got any honey or swarms, and some of those sturdy fellows, that have been playing tit for tat with me in the past. But my success so far this year, as well as last year, is making them look terribly down in the mouth; remember, it is only four years, since I began learning about bees, and like the majority that engages in it, will have nothing but bad luck, and but for want of perseverance, a great many more would eventually succeed well.

Now, Mr. Editor, when I commenced this letter, I did not expect to have written half of what I have done, and I am now getting like as if I wanted to have a long *say*, but will try, with your kind permission, not to say much. As regards hives, double hives, &c., I have tried many ways and many plans, all of which, I do not wish to burden you with of saying anything about, except of a few devices. My standard hives now are, and I hope I shall have no need of adopting any other shape, to gain success. My hives are inside, 17½ inches long, 12 inches wide, and 12½ inches high; my frames, therefore, are 16½ inches long, 11½ inches high, loose bottom and top, bottom fastened with hooks,

one on each side, so that I can put one on top of the other, for second story; this second story business I have tried till I got enough of it, and the bees too, I believe; it is, therefore, on the wall. I had them side opening, and fixed so for the purpose, and only for that purpose, to join two together and have a double hive; this is the way I managed a year ago, but there comes up a seemingly interesting controversy between two of the "great lights." Novice, No. 1. I will not accord him being No. 2—and Gallup No. 1, ditto. The former I have always looked upon as good and candid authority, and acknowledge my many thanks to him for what I have learned by his writing, and such confidence I placed in his advocacy on the double story system that I thought I could see a great desideratum in it; and, forthwith, without making first a single trial, I converted all my side-openers into permanent sides, and having loose bottoms instead of fixed ones; so far as it being a single hive, I will certainly not regret the trouble and extra expense in having made the alteration; but, oh! such perplexity and trouble I have had when all in order; I really want no more such experience on that head. About the 10th of June, when with us there is usually the white clover abundantly, and generally, honey in abundance. I raised on some stocks, one, two, and three cards of unsealed brood, from the lower story to the upper, leaving the queen below; the tops of frames from the lower story are three-quarters of an inch from the bottom of the upper story frames, no honey board between. Now for the result. In the upper story, I placed four drone combs and four worker combs, putting worker in the centre; when, on examining, after existing in that way eight or ten days, I found three of the five queens breeding in the top story; in one hive I placed the combs promiscuously, and in that the queen filled the combs with eggs right along; this sort of business I did not fancy, so I thought as she had now spent over a week up stairs, and am sure she did not go up and again down, until I put her down, and expected she would find empty cells enough now to keep her busy below, but the next day I found her back again; well, I thought, but now, this can't work. I lifted off the upper story and examined the lower, and found nearly all the cells in the brooding space with bee bread, and more or less honey; there was really no room for her to deposit her eggs. Now, I think this proves that the queen preferring to raise brood near the bottom, cannot be the case, for three out of the five insisted upon being in the upper story; so I went and reversed it, put the upper story below and the under one above, with the exception of the drone comb, which I kept above; in a few days one of three made her way again above. At this time I began to see that I should be subject to an endless lot of trouble, never knowing the condition of the hive after a few days, for to try to control a stock of bees, to keep them in the order I expected by this method; for I thought that it was no great trouble to lift one, two, or three cards of brood from below to the upper story, and those empty, or nearly so, from

above to below, but there are some that object to having the queen breeding in the upper story. But our friend Novice, No. 1, says: "and if the queen goes into the upper story, all the better." Well, I thought so too, but I expected that she would probably only occupy the central combs, leaving about two combs on the outside, above and below, or nearly so, making eight combs to occupy with brood, and the other eight for bees to store honey; but not so, all the combs, sixteen in number, in two of the five hives, the queen traversed, and used them for breeding. I suppose you think that I had some such queens that Mr. Furman understood Gallup to have; but no, for the brood, if condensed, would all go on seven combs. Now, in adopting this plan of the double story, I expected to avoid taking such combs as contained brood, for I am certain that taking combs, with brood all nicely sealed over, is more dangerous to the brood, when slinging out the honey, than when in its larvæ state; for I found, when in its last named state, it effects it only when either moved from its food bed, or thrown out altogether, which may easily be avoided by slow turning; but this is, in my opinion, such slow-poke work, that it is, at best, more unnecessary trouble than it is worth, and this year I had enough of that, taking up a comb heavy with honey, and perhaps no brood in it, the next one also heavy, but unless you examine close, you will overlook a patch, perhaps four inches square, or less, with larvæ in it; now, you will have to turn slow of course, and make it slow from beginning to end, and to say nothing of lifting off an upper story every time is, well, I am so sick of it, and more so, when thinking of having some fifty to do that way, as I am hoping to succeed in seeing that number yet in my yard some day; but I really should be contented with having no more than I possessed during the present honey harvest, for they took up all my patience I had to spare. What, then, with fifty?

But, now, just you listen a little to my no less good friend than friend Novice, I mean friend Gallup. I think his pet arrangement of spreading out the combs horizontally, has just relieved me of all that trouble again, I say again, because I managed five stocks in that way in 1871, therefore, I had my hives side-openers, to make two single hives answer for a double one, on the horizontal principle, and it worked very well; but one is, as it were, never satisfied till he jumps from the fryingpan into the fire and, *vice versa*. Though I am none the worse for that, it only proved something to me, that when theorizing about it, it was perfectly satisfactory, but when practicing it, the thing didn't result within expectation at all; and many more, I am sure, will adhere to the horizontal plan, after trying both ways; let the frame be what shape it will, it won't make a straw's difference. Now, by having the combs spread out, it is so easy to manage. You only take off the cover, and you have all your frames in sight; I have the contents of a single hive, moved into a hive of double the capacity of a single one, and placed in the centre, and place four empty combs on each side of the main stock, but without division

boards; there is no need for any, except you wish to contract the space of the hive for certain purposes, but not for gathering honey; and if the honey is coming in pretty fast, in order to keep the bees from getting the swarming fever, spread the combs of the main brood chamber, except the three centre ones, and alternate brood comb, then an empty one; and every other slinging, empty the honey from the brood combs that is not sealed, but do not break any sealing, unless it takes in too much of the breeding space. I always calculate having some 25 or 30 pounds of sealed honey, as such honey is undoubtedly the very best for the bees to winter on, and you are always safe, if the honey should, through some cause or other, suddenly fail; and I have not been troubled yet with swarming, not even a queen cell started; that it checks swarming, if managed in that way; I do not think there is any better method; and as for storing the honey even, well the bees, of course, fill up the combs nearest the brood, and so work outward, and when honey comes in at the rate of 12 or 15 pounds per day. I always found the combs on the outside filled up as any of the others, and get every ounce as much honey, as with the top story way; it should be slung every three or four days. I have said above, that I was not in favor of taking honey from a comb that has its brood sealed over, and the fact is, that I lost any amount of bees in '71. When opening the hive in July, the fourth day after slinging the honey from it, for the purpose of going through the process again, I found patches on different combs of different sizes, uncapped brood, all with their white heads protruding, and finding such, more or less in all the hives, operated on before, I took it seriously to thought; what could have brought this about; and I, according to my observation, found it to be through the slinging process, and do it as careful nevertheless as you will, it seems to me, when the inmate of these cells, after being sealed over, arrives at a certain point of maturity, its tenderness is far greater and easier chilled, than when younger. I mean to try experiments on that another season; I have found the same thing again this year, where I took such combs of sealed brood. Now, Mr. Editor, you will perhaps ask, if the horizontal plan of placing the combs was more advantageous than simply, as some may think I was only imagining it to be managed easier than the top-story hive. I will say that I am able to control my stock, as to have the brood all compact, because the queen has her combs placed, when putting them in the double hive, just in the same way as they were in the single hive, and with the empty combs on the side of the others. Now, if she finds her brooding space too small, she will undoubtedly occupy some of these combs, but not go from one end to the other across all the combs, nor do the bees fill up these empty combs all over with bee-bread; the bees store their bee-bread always near the brood; but, as I found in the top-story process, the queen making her way up above, filling the combs with brood, and below, as the combs are getting emptied of young bees; the bees fill those cells with bee-bread, and of

getting honey with that also. Now, to some individuals it makes, perhaps, no difference, whether the honey or brood is stored, but as in my case, having a good supply of drone combs, which are as good as any for storing in honey, and before you are aware of it, you will have the largest part of these combs stored with eggs; and, now, how are you going to do it to get rid of it? Well, I slung out the honey, and immersed the combs in cold spring water for an hour or two, and shook out the water, and there were no drones hatched, but this I can avoid entirely by the spreading out process. The queen never troubled me with her drone eggs, if she had enough of worker comb in the centre, and will not ramble all over the comb. I have no doubt by putting a honey board, perforated, between the lower and upper story, to keep the queen below, that a more satisfactory result may be achieved; but, how could there be anything superior over the spreading out the combs? I will also add that friend Gallup does not say how he places his entrance, as that is a great deal; for, if the combs run across the entrance, instead as I have mine, the combs run lengthways, with the entrance on the narrow end of the hive, the bees, if the entrance is by the side of the comb, the queen will occupy only those combs near the entrance, and as I once had it that way, the queen would go no further back in the hive than the fourth comb, having all brood on four, and stores on the other four combs, and bees will, and cannot winter safely in such a hive; I have found them starved to death with plenty in the hive.

Now, Mr. Editor, I think I have drawn my yarn quite long enough, and if you get to the end of this, without losing patience, you will have done all I will expect of you, and will say good-bye till some other time, soon.

Yours faithfully,
C. WURSTER.

Ontario, Sept. 27, 1872.

[For the American Bee Journal.]

Extracted Honey.

DEAR JOURNAL.—My experience during the present season still leads me to believe that extracted honey must come down to a low price. I hope I may be mistaken in this prophecy. It may be that as people become acquainted with it, and the method of obtaining it, their fears of adulteration will gradually disappear, and extracted honey will become a staple article of trade. At present, I find it sells better in small country villages than in large towns or cities. I have shown cans of beautiful extracted honey in our large towns, and it was next to impossible to convince the purchasers that it was pure honey. It was called manufactured, doctored, &c.; and your humble Apiarian was looked upon as a veritable humbug, and I certainly believe, if extracted honey was offered for one-half the price of sugar, the honest beekeepers would be insulted by the epithets of doctors,

humbug, &c. In small country villages, *manufactured* honey has not been sold extensively, as a consequence the buyer is not in fear of adulteration, and readily buys if his means permit.

LABELS.

I have used several styles of labels on my cans, and have learned by experience to use only those that have the heading, pure honey, printed plainly upon them. Mr. Muth, of Cincinnati, sends out the most elegant labels, but the words, machine extracted, printed thereon, spoils them for my use. The first labels I used were headed, pure extracted honey. I soon found extracted had a vague meaning to very many purchasers, and was interpreted into all sorts of ridiculous definitions, all tending strongly to humbug. The printers, who printed them, innocently asked if this new kind of extracted honey was any better than bee honey. Persons disposed to be sarcastic, would remark, that it looked very nice, and "I suppose you extract this honey right out of the posies yourself, what will become of the poor bees?" Another says, in answer to your explanation of the extractor, "Oh, yes! I see you set the hive, bees and all into the machine, and let them spin like lucifer, until the bees become so dizzy they have to let go of their honey, and out it runs. Oh! what a wonderful invention; what will they get up next?"

Now this is all very amusing; and if you find sensible people enough to purchase your honey you can enjoy it, and laugh at the folly of these would-be wise men. I therefore find that labels, headed pure honey, excites less comment than any other style. If honey is to be produced as lavishly in the future as some predict, people must become greater honey-lovers, or new uses must be found for honey, which is not improbable.

MY EXTRACTOR.

I do not propose to describe a new-fangled extractor, but wish to state how my comb supports, used in my extractors, are constructed. In a former communication, I explained the difficulties I had with a fine wire cloth support. I have this season used a support made with strips of tin, doubled lengthwise, and set in the frame perpendicularly, one inch apart, with no wire cloth about it. The spaces between the tins give the honey the utmost freedom to flow from the cells, and new comb is supported as well as old. If any of your readers are about to construct a machine, my advice is to throw aside all wire cloth, and substitute the tins. If the tins are required very long, it would be well to support them in the middle.

NOVICE.

"Novice" will please explain his metal corners. When these corners are attached to a frame, the projections are much too long for the rabbet. Have we got to cut them off? If so, why are they not made the right length at first? The rabbets are about one-fourth of an inch, the projections nearly an inch. Please explain.

SCIENTIFIC.

[For Wagner's American Bee Journal.]

Broken pieces of Comb.

Mr. EDITOR:—It may not be uninteresting to your numerous readers, some extracts, on different subjects connected with bee-keeping, collected from different authors, written years ago. We give the name of the writer with the date of publication, and it has often occurred to us while poring over these old relics, that "history is continually repeating itself," for it is written, "there is nothing new under the sun."

"**SWARMING.**—" It is a common practice with country people to ring a bell or pan when the bees swarm; fancying the noise hinders them from flying far, and causes them to settle sooner. I cannot say I ever found that this makes the least difference, &c. * * * * *

After hiving the bees, the swarm should be well shaded, whilst it remains on the ground, with the boughs of trees, &c., lest the too powerful heat of the sun should offend them, and cause them to rise a second time. * * * * * Many people have imagined they can tell when bees are going to swarm by a peculiar noise the females make at that time; but this only happens before a cast, or second swarm, and never before the first. These calls (as they are commonly styled) may be heard very distinctly two or three days before the cast rises. * * * * * The casts usually happen the ninth day after the first swarm, if bad weather does not prevent them coming out. **BROMWICH, 1783.**"

"WHY BEES SWARM.

"The reason of their swarming is for want of room in the hive; for when they have bred so many that the hive will not contain them, then, after they have lain out a while in a large bunch at the mouth of the hive, in a fine warm day generally, they swarm; but as there is no general rule without an exception, so here you will sometimes find they will not swarm, &c., &c.

WARDER, 1749."

NO. OF BEES IN SWARM—QUEEN—QUEEN CELLS.

The swarm without being a very strong one may consist of twenty thousand bees produced in about two months. * * * * * A singular circumstance attending this prodigious fecundity of the queen, is, that she keeps in her body for several months, that impregnating matter which was given by the males, who were put to death without mercy in the latter end of the preceding summer. * * * * * The bees depart from their usual style of building when they are to raise cells for bringing up such maggots as will become queens. These are of a longish oblong form, having one end bigger than the other, with their exterior surface full of little cavities. Wax which is employed with so geometrical a thriftiness in the raising of hexagonal cells, is expended with profusion in the cell which is to be the cradle of a royal maggot, &c.

MILLS, 1766.

SITUATION OF HIVES.

Skreen them from the summer sun, because the heat of it is greater than the bees or their works can bear; and skreen them from the winter sun, the warmth of which will draw them from that lethargic state which is natural to bees. A certain degree of cold, and a greater degree of it than is commonly imagined, is favorable to bees in winter. * * * * * Let your bees therefore be so placed, that the sun may not shine upon them at all in the winter to entice them abroad, when they can get nothing but an appetite, &c., &c. **WHITE, 1764.**

STRONG SWARMS.

It is evident that a hive that has a great number of bees in autumn, stands a much better chance not to perish by the severity of the winter, than a hive that has not half the number of inhabitants; for which reason I would earnestly recommend it to my readers, never to kill a single working bee at any season of the year; but in autumn, to unite all the bees of those hives, from which the honey is taken, to those that are intended to be kept as stock hives. This will render them fit to defend themselves, both against the severity of the weather in winter and against robbers in spring; and will also greatly forward their labors as soon as the working season returns; for as has been already observed; it is of the greatest importance to have the hive always well stored with bees.

BONNER, 1795.

TO PREVENT ROBBER BEES.

Stop up such hive till evening; then discharge the strangers. Keep the stock close shut up the next day, which will give you a fair opportunity of engaging the robbers by themselves and effectually prevent further attempts. Yet, provided they should afterwards return, when your doors are again set open, disturb the true bees by a bunch of stinking madder fastened to the end of a little stick of convenient length, till they begin to show their resentment; then will you see them seize the robbing bees, &c., &c. * * * * *

Should your hives thus attacked have but a few bees and little honey, it is better to take them, than stand a trial.

THORLEY, 1744.

DRIVING BEES.

Remove the hive from which you would take the wax and honey, into a room, into which admit but little light, that it may at first appear to the bees as if it was late in the evening. Gently invert the hive, placing it between the frames of a chair, or other steady support, and cover it with an empty hive, keeping that side of the empty hive raised a little, which is next the window, to give the bees sufficient light to get up into it. While you hold the empty hive steadily supported on the edge of the full hive, between your side and your left arm, keep striking with the other hand all round the full hive from top to bottom, in the manner of beating a drum, so that the bees may be frightened

by the continued noise from all quarters, and they will in consequence mount out of the full hive into the empty one. Repeat the strokes rather quick than strong round the hive, till all the bees are got out of it, which in general, will be in about five minutes. It is to be observed, that the fuller the hive is of bees, the sooner they will have left it. As soon as a number of them have got into the empty hive, it should be raised a little from the full one, that the bees may not continue to run from the one to the other, but rather keep ascending upon one another, &c.

WILDMAN, 1770.

PROPER FOOD FOR WEAK HIVES.

I am decidedly of opinion that bees fed in the autumn should have honey, in preference to any other kind of food. * * * * This is my reason for recommending honey only—indeed I have never seen bees so healthy as those fed on the simple mixture of honey and water. In Spring, other kinds of food may answer very well, as a small portion only is given at a time, and very little of it deposited in the comb, &c.

PAYNE, 1838.

GREATEST ENEMY TO BEES.

Nothing is more prejudicial to bees than ignorant attention. Their most formidable enemies are, perhaps their possessor, &c., &c.

DE GELIEW, 1829.

DESCRIPTION OF QUEEN BEE.

The queen bee is a *faire* and stately creature, longer by the half, and much bigger than a common honey bee, yet not so big as a drone, but somewhat longer. She differs from the common bee both in shape and color; her back is all over of a bright brown, her belly even from the top of her fangs to the tip of her train, is clear, beautiful and of a sad yellow, somewhat deeper than the richest gold; her head is more round than the little bees, &c., &c. * * * * Her wings are of the same size with an ordinary bee, and therefore in respect to her long body, they seem very short. * * * * I have provoked and forced them to sting by hard holding of them and putting their tails to my bare hand, but could never perceive them willing to put it forth. Nay, when I have forced it out, yet she would not enter it in my hand. In a word, the queen bee in her whole shape and color, is a goodly and beautiful creature.

PURCHASE, 1657."

Having extended these extracts to considerable length for a newspaper article, we will cut it short, observing, that although many errors appear in the works of the old writers on the bee, we find the grossest blunders and assumptions in those of more modern date, and it is to be deplored, that some of these publications have such a wide circulation, or were ever set in type. The ignorant and unobserving believing everything in book form, printed, to be true.

Murfreesboro, Tennessee.

H.

[For the American Bee Journal.]

A Rapid Increase.

MR. EDITOR.—I must record one of the most prolific cases of increase that I have ever heard of, especially in the north.

A neighbor living three miles north of me, on the open prairie, had lost all his bees last winter, but two stands. I saw them last winter in the old box hives, both hybrids, his black queens having mated with Italian drones. On the 8d day of June, one swarmed; the young swarm swarmed three times. I saw the young swarm after it was put in a hive. I offered the owner \$6 for it. He would not take it. I saw his bees a few days ago, and he has to-day seventeen swarms of bees in hives, and three ran away to the woods, making in all twenty-one swarms, old and young. I examined them all, and out of the seventeen fifteen will winter. They have got plenty of bees and plenty of honey. One of the fifteen stands has got more bees than any of the swarms that I have that did not swarm. He put them all in old box hives. He did not get any honey.

R. MILLER.

Melugin Grove, Lee Co., Ill., Sept. 9, 1872.

[For the American Bee Journal.]

An Explanation Desired.

EDITOR AMERICAN BEE JOURNAL:—I would like to have an explanation of the occurrences here detailed. October 3d or 4th, on a visit to the apiary of an acquaintance, he took a virgin queen out of a nucleus to show us, and found her covered by worker bees, apparently attacking her with murderous intent. He caged her, and again liberated her next day safely. October 5th, I took out a queen from a nucleus in my own apiary, and found her surrounded and attacked in the same way. This queen had been fertile and laying since September 15th, twenty days, at least. I caged her, and again liberated her next day. Having some sweetened nutmeg water for another purpose, I used it on her and her swarm, when I liberated her. She is still doing her duty. In the last case, the swarm was in good condition every way, only that it was small (only three frames). The question is, why were they attacked? Let some bee-keeper answer satisfactorily.

H. W. S.

Cincinnati, Oct. 17, '72.

Snow is very hurtful, when it dissolves with the heat of the sun, for the bees with the heat will be rolled out of the hives, and they are no sooner forth, but they are dazed and blinded, and cannot find the way in again, but flying a while up and down, being weary, think to rest themselves on the snow, which they no sooner touch, but they are killed; be sure therefore at such times to shut them in. Purchase, 1657.

Bees at Fulton, Ill.

EDITOR JOURNAL.—As the season is over for the work of the busy bees, I will try and give you a report of my season's operations. I had 80 colonies of bees this spring, saved out of 85 in the fall of 1871, and only about one-third of them in good condition, and the loss of bees in this section was not from thin or unsealed honey, as I never seen the honey thicker or as near all sealed up as it was in the fall of 1871.

I took all the honey from my bees this spring with the extractor, as soon as the weather was warm enough, and in doing so, took out all the drone comb, and took cards of worker comb and put in the place of them, and fed most of the honey back to the bees as they wanted it to keep up as rapid breeding as possible, and commenced equalizing at same time, and commenced dividing as soon as there was any honey in the flowers, and using all the worker comb from the stocks. I lost and have increased to 60, counting three swarms that came to my yard and went into the hive themselves, when I was away from home. I did not have any natural swarms on account of dividing in the usual swarming season, but the stocks got so strong they began to swarm in the latter part of August, when the flowers began to yield honey the second time.

Yield of honey for the season of 1872.—The white clover did not yield any honey before the middle of June, to amount to anything; not enough to keep the bees breeding, without feeding. After middle of June until first week in July, white clover yielded moderately, but the most of it was used in breeding, or stored in brood chamber. I only got 300 lbs. of white clover honey with the extractor, and none in boxes. The bass wood, or linn, as it is called in some parts, did not yield any honey in this section this year. The rains in last July and first of August, started the heartsease and other flowers so, the bees began to store honey and swarm about the middle of August, and a great many hives did not have over 2 or 3 lbs. of honey in the hives by the time the second yield of honey commenced. The first honey the bees got in August was from a weed that grows on the bottom lands, and comes into bloom from 1st to 10th of August, and lasts about two weeks, and yields a honey almost as light as white clover, but not as pleasant a flavor. Part of my bees went four miles to work on this flower, and part of my bees I took to the flowers, and they done a great deal the best. I have taken in all this season, about 1800 lbs. of extracted honey and 250 lbs. of box honey. There is very little box honey in this section this year, the bees have not seemed to want to build comb this year out of the brood department of the hive. I have not been able to get much comb built in frames in top stories, even where the honey board was removed and put on the top of top story. I have my top stories same size, as lower part of the hive, so I can take the honey board off from the main hive and put it on top of the top story, so I do not get the underside of my covers all stuck up with propolis.

My method of wintering on summer stands as

soon as the middle of November, if not before, take the honey boards off the hives and have good, thoroughly dry, corn cobs cut just the length, so two will reach across the hive (I have a machine that cuts both ends of the cobs at the same time, as fast as you can handle a single cob at a time). Lay the cobs' butts and points, turn about, and that keeps them straight. After the frames or top of hive are all covered with cobs as close as you can lay them together, lay over top of cobs a common newspaper, at least two thicknesses, so as to stop the excess of upward ventilation, and close the entrance below so only a few bees can go in or out at a time, or perhaps it might be better to have a three-quarter inch hole bored in front end of hive below the portico (I use the Langstroth hive with top bar of frames seven-eighths wide, as the cobs would not do any good on the close fitting frames), this lets the moisture pass off, and the bees are kept dry, and my bees usually begin breeding about the first to middle of January, so as the old bees die off the young bees take their place, and are healthy and strong in the spring, but last year my bees stopped breeding in fore part of September, and did not commence until March or first of April, this spring, and I think this is the reason of the heavy loss in this section, as the loss was mostly in March and April, whether wintered indoors or out. R. R. M.

[For the American Bee Journal.]

Bees in New Hampshire.

MR. EDITOR.—It is very interesting to read the reports of beekeepers from different parts of the country. I, therefore, thought it best, and it may be of interest, to you and others, to know how we get along away up here in Coos county, N. H., which I have found to be the wrong place to keep bees for profit or in large numbers.

I have paid out, first and last, for bees, hives, patent rights, bee vails, smokers, &c., &c., to the amount of \$100. Had 36 swarms three years ago; have lost them all but ten, and they are in a bad condition, lacking honey. I have not had but one swarm come off this season, and that did not make me any surplus.

I got 50 lbs. of box honey mostly from one hive. It has been so wet they could not work.

Now, I am getting sick of the business here, and have wished I was in Iowa or some good place where I could make bees a speciality and profitable.

I have a lot of empty hives on hand, comb-frames, dry comb, and honey boxes of the K. P. Kidder pattern. So I shall winter what I can, and wait through another year, to see what next season will be, hoping for a good season, as I have always done.

WILLIAM C. MERRILL.

Colebrook, Coos Co., N. H.

When honey abounds, black bees will probably gather as much as Italians; when it is only to be got by extra labor, the Italians are sure to do much better than the blacks.

THE AMERICAN BEE JOURNAL.

Washington, December, 1872.

We trust that there will be a very large attendance of beekeepers at their National Convention, to be held at Indianapolis, on December 4th, 5th, and 6th. For railway arrangements see page 144. We hope to be able to furnish an early report of the proceedings.

We have received many letters from subscribers of the AMERICAN BEE JOURNAL acknowledging the great benefit they received from articles that have from time to time appeared in the Journal, but there are some, it seems, who have not received any benefit from the Bee Journals, but have actually met with misfortune through taking the papers. We give below the contents of a letter recently received:—

"I ask you to discontinue my paper. * * * *
Bees seem to be of no value to me any longer. My bees nearly all died last winter. I have been taking the three principal Bee Journals of this country for the last three years, and am getting further back every year, hence this order."

THE AMERICAN BEEKEEPERS' GUIDE, by E. Kretzmer, Cobury, Montgomery Co., Iowa. The above manual was received too late for notice in the Journal of last month. It contains, in a condensed form, a large amount of practical matter derived from the experience of both American and German beekeepers. It has, what so many works on bees have not, a very full index, so that the reader is enabled readily to find anything contained in the volume.

We have received a fine lithograph drawn on stone by P. Moran, entitled "Goat and Sheep." Single copies, in black and tint, can be had at 50 cents and chromos at \$2.00 each, by addressing A. Lovell, care of N. W. Ayer & Son, 733 Sansom street, Philadelphia, Pa.

CORRESPONDENCE.

Last winter and spring bees in this locality nearly all died in the summer, they done very well. I commenced in the month of May, with seventeen hives, and I got in boxes of surplus honey four hundred pounds hundred weight, no one in this section of country can any year get as much surplus honey as I get; my plan is artificial swarming, I take one hive or swarm from two hives.

JOHN McLAUGHLIN.

Tyronne, Ontario, Oct. 14, 1872.

Report from Minnesota.

Bees did not gather hardly honey enough to live on, until the first of July, since then we have had one continual honey harvest until frost came. Consequently we had but few swarms. Extracted three times, and have now supers full of sealed honey.

C. C. ALDRICH.

Mr. EDITOR:—I shall endeavor to give you and the readers of the AMERICAN BEE JOURNAL a sketch of my bee business for the last six months.

I commenced last winter with 60 swarms of bees, and lost 53 through dysentery. The entire community here is stripped of bees, one man lost 119 out of 125; another lost 80, all he had. I could figure up 500 stands of bees that died in two towns. I bought 70 stands last May, so now I have 107 stands. This has been the poorest season for bees that I have seen since I have been in the business. It has been very dry here for three years. I will not get over 4,000 pounds of honey in all. About 2,500 pounds box honey; the rest extracted.

I find it a poor policy to rely on natural pasture altogether.

R. MILLER.

Melugin, Lee Co., Ill., Sept. 9, 1872.

I wish to say I am a recruit; have strapped my knapsack on my back, subscribed for three Bee Journals, bought a Langstroth hive, and am marching on to victory. I have been trying the old method of bee warfare long enough, have been laid *hors du combat* in every engagement until I got the Langstroth Hive, and the first shot I take fifty pounds of box honey from one hive without a sting. A lady comes in and asks "what do you ask for box honey?" two dollars I replied. "I will take two boxes right." Here I am reminded I am partly in debt to the Journal for this success, and my subscription must be out, so here is your part of sales, Mr. Editor. Give us another year and consider me in for the war, for I propose to fight, and while bees and myself inhabit this country.

IRA GREEN.

Lapier, Mich., Oct. 31, 1872.

Bees have done very poor this season, but little honey has been gathered and of a poor quality, swarms were not quite as numerous as last year, one-half of these will not have honey enough to winter on, more than one half the bees perished in this section last winter.

Yours, &c., JAMES HARVEY.

Pitcher, Chenango Co., N. Y., Oct. 28, 1872.

I submit the following report.

Number of stocks last spring, mostly weak,	16
Number of stocks, this fall,	26
Net weight of box honey,	lbs. 1,200
Net weight of bees and stores, Nov.	
2d, 1872,	lbs. 1,255

D. P. LANE.

Koshkonog, Wis., Nov. 6, 1872.

EDITOR JOURNAL.—Two years ago, while at Boonsboro, Iowa, I was informed by Lewis Davis, of that place, that the bees worked strong on watermelons. This year I planted quite a large patch, which yielded a great quantity of melons, and all through this month, when the weather was warm, the bees have worked on them strong. I cut them once in two, and the bees took most of the inside out. I would like to have beekeepers try it another year and report the result.

W. H. FURMAN.

October 20, 1872.

[For the American Bee Journal.]

The November "Journal."

We were well pleased to receive our Journal for this month, several days earlier than usual, and hope you will, Mr. Editor, send it out so that it may reach us western people as near the first of each month as you can conveniently. The value of any periodical is greatly enhanced by being issued with regularity, while on the other hand, nothing so fills the mind of the subscriber with distrust and uncertainty, as to have paper come to hand all the way from the first to the last of the month. But, lest we be regarded as being "personal," we break right off here, and take up our "review." The first thing that attracts attention this month, is the translation of a dissertation upon the value of honey. Both as an article of diet and a remedy for certain "ills that human flesh is heir to." We can corroborate, from personal experience, much of what Karl Gatter says of the value of honey. Possessing, as it does, in a marked degree, diuretic properties, and alterative and mucilaginous qualities also, it is in very many cases much more efficacious as a medicine than pills and powders, being at the same time far pleasanter to the taste. But honey, like everything else, should be eaten in moderation; for some kinds of honey are found to disagree with many people. Pure liquid honey is one of the very best applications for cuts, sores, swellings, &c. In fact, we think that the American people but vaguely realize the very great value of "natures choicest sweets;" and we hope the day is not far distant when the mel-extractor will place honey in its most wholesome form, within the reach of all the people, from the Atlantic to the Pacific. And we verily believe, that if certain bee-hive venders would turn their attention to honey bee culture, instead of trying to obtain money from people for worthless moth trap contrivances, adding honey to their articles of diet, that they might in time be able to speak of their brother bee-keepers a little more respectfully, using less abusive language—a consummation we devoutly hope to see accomplished.

The proceedings of the Michigan Beekeepers Association will, no doubt, be read with interest. They bring back to us some "personal recollections" of what we saw and heard at Kalamazoo. Many of our readers have, no doubt, had experience in sending box honey to market, and thereby know how pleasant (?) it is to learn that much of it had arrived in a sadly "delapidated condition." Mr. Bingham exhibited a box of honey, with two glass sides, holding about four and one-half pounds, we believe, which he said could be "safely shipped a thousand miles." The box was nearly square, and three small pieces of comb had been attached to the top previous to being put upon the hive, so as to have the combs built parallel to the glass. Where thick combs of honey are fastened to glass, they are almost sure to leak; for the glass expands and contracts with the variations in temperature. By inserting these small "guide combs," we can secure our combs, built of proper thick-

ness and securely attached to the wooden sides. Moreover, such box honey looks better in market, and sells more readily at better figures; oftentimes making a considerable difference in the profits of the aparian. You all know that it has often been asserted that it is an impossibility to fertilize queens in confinement. Well; let us see. By invitation, we visited the apiary of Mr. A. C. Balch, a whole-souled, intelligent and practical aparian, who resides in this, the largest village in the United States, the lovely and picturesque Kalamazoo. He showed us some fine Italian stocks, the mothers of which he mated in his hands by force. But we hear some "doubting Thomas" ask, "How did he *know* this was so? How could he tell that the queen did afterwards leave the hive and mate with the drone?" Just the point, dear reader, we were about to consider, when you interrupted us. The way that Mr. Balch discovered that queens could be mated with any drone (not five, ten, twenty, or a hundred, *but just one*) desired, was something like this: He had a fine Italian queen that lacked one wing, and could not fly out to meet the drones, in the usual manner. Knowing that he could no more than lose her, he thought he would try the experiment of *forced fertilization*. He accordingly took her from the hive, caught a pure Italian drone, and mated them. He observed an increased size of the queen the moment she mated with the drone. Replacing her in the hive, she commenced laying, and proved to be a fine, prolific mother. Is this evidence conclusive? Lest some one, who is determined not to believe in the possibility of controlling pure fertilization, may still doubt, we will relate just one more incident, as related by Mr. Balch. He had a young queen that laid only non hatching eggs. Thinking that the fault might be in the bees, he inserted a card of eggs and larvæ, taken from another hive, when they were hatched in due time. Repeating the experiment, with like results, he became satisfied that the queen was, in some way, defective. He then mated her with a selected drone. She then being about one month old, and her eggs hatched with uniformity afterwards. Does not this look, just a trifle, as though fertilization *might* be controlled? There is very much more we would like to say about what we saw and heard; some things about our good looking president, who abounds in sparkling wit and humor; the practical, sensible vice-president, the frank and genial secretary, and the— Well, we don't believe that we have anything to say about the treasurer. But, as it is now nearly midnight, we must not longer dwell in "the village of shade and beauty, the bright Kalamazoo."

The story of "Scientific" will, probably, read to many as though it were a delineation of their own experience in wintering bees a year ago. Mr. Hazen gives us another column of figures to ponder over, as usual. We do not wonder that he is called by many the "figurative" aparian. We are pleased to hear that bees do so well away off on the plains of Colorado. At the time we visited the spot, where Greeley now stands, we could not help think, that even Hazen's non-swarmers would stand a poor chance of piling up

its 200 in one season, or even the first century. Mr. Quimby's views will command the attention of all who wish to winter bees without loss. We ourselves examined large numbers of stock in western New York, and are satisfied that Mr. Quimby's conclusions are correct, so far as the eastern States are concerned. But here at the west the conditions were different. See report of Michigan Beekeepers' Association. In our own article, we see a mistake or two that needs correction. In the twelfth line from beginning, the word "practical" was omitted. It should have read, "and far more practical than they now are." In the twenty-first line from the end of last column, the word "had" should be "has," and would then read, "and if Novice has not," &c. But there, that old clock has just struck twelve, and we must "adjourn."

HERBERT A. BURCH.

South Haven, Mich.

[For the American Bee Journal.]

Questions Answered.

Mr. Root, in the Journal for September, writes: "May we, by the way, ask Mr. Jasper Hazen one question? In those localities near him, that were overstocked some seasons, did those bees die of starvation that had made so many hundred pounds box honey in a season? If so, they certainly did not starve *themselves*; their *greedy* owners starved them. On the other hand, if they died of starvation, without furnishing any surplus honey at all, there seems to be a disagreeable feature of his hive and pile of boxes, that he has not mentioned in his report of astonishing yields of box honey. Will Mr. Hazen tell us more about these colonies dying of starvation because the locality was overstocked?"

Answer:—The apiary that has at three different times in nine or ten years, been reduced from thirty, or a little more, by starvation, to four or five, and again to three, and the last time to two colonies, was kept entirely in the chamber hive, with two thousand cubic inches or more in the breeding apartment, and boxes in the chamber of the hive of about twenty-five pounds capacity to each hive. They gave their keeper little or no surplus, and starved in the winter. Further, as a rule, my best swarms that have given me the largest amount of surplus, in *that pile of boxes* referred to, have generally been in as good preparation for winter, as any of my colonies. One that gave me 200 pounds of box honey in 1870, 143 lbs. in 1871, has in 1872 given but about 30 lbs. Desiring to secure swarms from that and one other of my best stocks, I left them exposed to the sun. The first gave two swarms and surplus named above. The other gave one large swarm and the product of surplus 70 lbs.

In the first case, in 1870 we had to remove most of our pile of boxes, and substitute empty ones. This hive is without frames, having simply bars, and is more simple in its construction than the one described by Mr. Root, or *Novice*, in the communication referred to.

But about the overstocking. If there is no

danger of it, why does my friend wait for increase of forage before he puts his thousand colonies in the field? Why content himself with seventy-one?

Mr. Langstroth thinks there is no danger of overstocking. He informs his readers of apiaries of 5,000 in Russia and Hungary; 2,000 colonies to the square mile in East Friesland. Kingdom of Hanover, 141 colonies; the island of Corsica, 52 colonies; Bohemia, 8 colonies, per square mile. On page 300 he speaks of land so unsuitable for beekeeping as to render it unprofitable to keep them at all. Is it not probable that our country embraces every variety of honey producing fields, from the most productive to those utterly barren, "where it would be unprofitable to keep them at all?"

Would it be safe to put the 5,000 apiary of Russia upon the field of East Friesland? Would it answer to put the 2,000 of East Friesland upon each square mile in the Kingdom of Hanover? Would it be safe to put the 141 colonies of the Kingdom of Hanover upon each square mile of Corsica? Or the 52 per square mile in Corsica, upon each square mile in Bohemia? Or the 8 colonies of Bohemia upon such tracts in our country so barren as to render it unprofitable to keep them at all? Or for Mr. Root to place 1,000 in his field before his bass wood trees have grown?

I have endeavored to answer the question proposed by Mr. Root, and propose a few for his consideration.

JASPER HAZEN.

Albany, N. Y.

[For the American Bee Journal.]

A Queer Trait in Bees.

About the 1st of August, 1872, I noticed some dark, fine gratings before a hive. The next day I opened the hive and found, to my surprise, that the bees had cut out one comb two-thirds of full size, and one-half of another comb. Before the bees stopped they cut out two combs over two-thirds of each comb and built new comb in its place. It was very old comb. There were no moths in the hive. It was an Italian swarm. There was no brood in the combs. This is something that I never saw before.

R. MILLER.

Mattegin Grove, Lee Co., Ill.

Spiders.

Most aparians have considered the spider the common enemy of the bee. That they make their webs in unwelcome places about an apiary, and now and then entangle a bee, is true, and the web is easily brushed away, and its maker destroyed, *but* the writer has found that inside of a Langstroth hive (i. e. where the boxes are put on) the spider is a real benefit. A little observation will show that no moth miller escapes them, and though the spider cannot get into the innermost hive, he is a complete exterminator of all intruders. Let him live.

D. C. MILLETT.

Holmesburg, Pa.

[For the American Bee Journal.]

Fertilization in Confinement.

As there has been a good deal said about "Fertilization in Confinement," *pro* and *con*, in the different bee journals and agricultural papers, it may not be out of place for me to put in a word.

In the first place, I will say that it is an *unmitigated humbug*, concocted by a few aspiring Italian queen bee raisers, in order to sell their queens, as superior to queens raised by those who do not understand the art of humbugery, and those who did not wish to practice the art of deceit.

When it was first started, many of the very best apiarians, with hopes that there might be some truth in it, and that it would become a success, tried it until their patience became worn out, and they gave up all hopes. Among them, are Rev. L. L. L., R. M. Argo, Doct. Bohrer, E. Gallup, and many others that might be named, and most of them thought they had succeeded. A few of them still insist that it is a success, notwithstanding the rejection of all the offers that have been made for them to give it a fair trial, and agreements to come to my apiary and fertilize fifty queens in confinement, for \$10 each, and I have since offered \$2,500 for one hundred, and I am still willing to give \$100 for each queen they make a success in my apiary next season. Among those that insist on its being a success, is one that is called a prominent apiarian of this State (but I would say that he or *she* is a successful Langstroth copiest), but I suppose they think it being well stuck to, is as good as though it was the truth. It would not be consistent with themselves unless they did, and they have gone so far as to say that I did not tell the truth, in saying that they agreed at the Cleveland Convention to come to my apiary and learn me the fine art for the small sum of \$500. So I will give the report as given by the reporter, a believer in fertilization in confinement, and as published by the publishing committee:

When discussing the fertilization question, "Report says," W. H. Furman, of Cedar Rapids, Iowa, said he would pay \$500 to any person who would come to his apiary and fertilize fifty queens in confinement, and \$100 for each one he was permitted to see so fertilized. Mr. Waite and Mr. Mitchell would give him all he wanted at that price; and as I repeated the offer the next day, the report says, as several members were willing to accept the challenge, no doubt but a decided test will be had. But they have failed to come to time, and they never will, any more than Greeley will be President.

The question is often asked, what is the meaning of this fertilization in confinement? It is as I said before, a humbug. But they claim it is confining the queen so she cannot fly out, and select such drones as you may desire, and confining them in the same place, so as to mate with the queen, but while so doing they leave the entrance so the workers can fly out, but as many of the young queens are small enough to go where the workers can, the more small

queens you have the better your success, and there lies all the secret; and the failures are where the queen is too large to pass the same entrance that the workers do; and, therefore, does not become mated, and after a certain length of time she will not become mated, if she has a chance to fly. If you wish to buy a poorer quality of queens, buy of those who advocate the non-flying fertilization, and you will be sure to get all the smallest and poorest. Others ask, *why* will they not mate in confinement? I think it was so ordained that the young queen should mate on the wing, so she would be able to lead off a swarm, when she became the mother bee; otherwise, any of the imperfect queens would become mated in the hive, and would not be able to lead off the swarm; and there are a great many such. And again, they would be likely to breed in and in too much, and they would become very inferior to what they now are.

W. H. FURMAN.

Cedar Rapids, Iowa.

N. A. Bee-keepers' Association.

The next session of this Society will be held in Indianapolis, December 4th, 5th, and 6th next.

RAILROAD AND HOTEL ARRANGEMENTS.

The following roads will return members of the Association *free*, some by round trip tickets, some on the Secretary's certificate that full fare has been paid coming:

Indianapolis, Bloomington and Western Railway. Runs from Peoria to Indianapolis. On Secretary's certificate.

Ft. Wayne, Muncy and Cincinnati R. R. Runs from Ft. Wayne to Connersville. Round trip tickets will be sold at all stations.

Cincinnati and Indianapolis Junction R. R. Runs from Cincinnati to Indianapolis. Round trip tickets will be sold at all stations.

Indianapolis, Cincinnati and Lafayette R. R. Runs from Cincinnati to Lafayette. Round trip tickets can be had at Cincinnati, Lawrenceburg, Greensburg, Shelbyville, Thorntown, Colfax, Lafayette, Lebanon and Zionsville.

The following railroads will return members at one-fifth fare:

Cleveland, Columbus, Cincinnati and Indianapolis R. R. Runs from Cleveland to Indianapolis—also from Columbus to Indianapolis. Return tickets will be sold to members at the office in Indianapolis, at one-fifth fare, on presentation of the Secretary's certificate.

St. Louis, Vandalia, Terre Haute and Indianapolis R. R. Runs from St. Louis to Indianapolis. Returns members at one-fifth fare, on presentation of Secretary's certificate that full fare has been paid one way. These certificates must be presented to W. Ogden, Esq., at the office of the Gen. Superintendent at Indianapolis.

The following hotels will keep members at reduced rates:

Porter House—W. H. Porter, Proprietor; S. E. corner of Illinois and Maryland streets. Board \$1.50 per day. To members \$1.00.

Revere House—N. D. Keneaster, proprietor; N. Illinois street, opposite Bates House. Board \$3.00 per day. To members \$1.50.

Palmer House—Jeff. K. Scott & Co., proprietors; S. E. corner Washington and Illinois streets. Board \$2.50 per day. To members \$2.00.

R. R. Murphy's Improved Honey Extractor.



The best, most desirable and cheapest Geared Machine in the market. It will empty the most honey with the least injury to the comb of any machine in the market. Also the best honey knife in use for uncapping comb with inequalities in it.

I am also manufacturing all kinds of Honey Boxes and Frames from white pine, on short notice, as the cheapest. Please give name, P. O. and Co. plainly written to avoid mistakes.

Send stamp for terms, etc.

Address, R. R. MURPHY,
Fulton, Whiteside Co., Ills.

May, 1872—6mo.

NATURAL, PROLIFIC ITALIAN QUEENS.

A pure, tested Italian queen, warranted, with guarantee of safe arrival, \$5 each.

A pure Italian queen, sent as soon as fertile, without guarantee, \$1.50 each; three for \$4; four for \$5.

They are more prolific, live longer, and their workers live longer, are more industrious, and in same season and locality will lay up more surplus honey than workers of artificial queens.

Extract from a letter, dated April 4th, 1871:

While I differ entirely from you on this point—Natural v. Artificial Queens—I still think your plan good one for getting choice queens.

L. L. LANGSTROTH.

The cash must accompany every order. Send early to secure, as I shall raise only a limited number this season.

JOHN M. PRICE,
Buffalo Grove, Iowa.

CAUTION TO BEE-KEEPERS.

All persons using the Triangular Comb Guide, or "bevelled edge," in Langstroth hives, are cautioned against paying K. P. Kidder, or Agents, for such use. At our request, he has sued us, and we believe the Courts will soon decide that the said Guide is PUBLIC PROPERTY, and that we are not infringing his rights in the Clark Patent.

L. L. LANGSTROTH,
Oxford, Ohio.

R. C. OTIS,
Chicago, April 20th, 1871. Kenosha, Wisconsin

CHESTER WHITE PIGS.

A few pair of pure Chester pigs from 4 to 8 weeks old, at \$15.00 a pair, one half former prices.

Address,
W. H. FURMAN,
Cedar Rapids, Iowa.

May, 1872—1f.

MONARDA PUNCTATA.

I have got 5 lbs. of the Monarda Punctata seed which I will send, postpaid, in cloth two ounce bags, for 50 cents.

Address, JAMES McLAY,
Dec. 1t. Box 1514, Madison, Wisconsin.

HIVES AND BOXES FOR SALE.

I have for sale and will make to order Langstroth Hives of good pine lumber and give them two coats of good oil paint, and one set of six boxes for \$2.50. I also make hives of different styles without porticoes or bottoms; I also make to order cheap boxes, five and six dollars per hundred. Order early.

F. M. DICKINSON,
Whitney's Point,
Broome Co., N. Y.

Dec. 8 mos.

THE MAINE FARMER.

The Maine Farmer is an agricultural and family paper. Contains the best agricultural articles and select reading for the family circle. Send for specimens. Address,

MAINE FARMER,
Augusta, Me.

THE OHIO FARMER.

TERMS OF SUBSCRIPTION.—Single copy one year, \$2; for a club of four, \$8; and an extra copy will be sent to an agent six months; and for a club of eight, \$16; and an extra copy free one year. For each additional subscriber for one year at \$2, the agent may retain twenty-five cents for his trouble. Subscriptions may begin at any time, and will be taken for three or six months, at the rate of \$2 per year. Sample copies sent free. Back numbers furnished to those desiring them.

OHIO FARMER,
Cleveland, Ohio.

COLMAN'S RURAL WORLD.

Published weekly, at St. Louis, Mo., by NORMAN J. COLMAN. Our new prospectus for the coming year is issued. We want clubs, large clubs, and will give useful premiums for them.

NORMAN J. COLMAN,
417 Pine st., St. Louis, Mo.

NORTHWESTERN FARMER.

Only Agricultural paper in Indiana.

SUBSCRIPTION TERMS.—\$1.50 each for less than five copies; five copies, \$1.25 each. Agents wanted everywhere. Send for our *Liberal Premiums List for 1873*, and special terms to Agents.

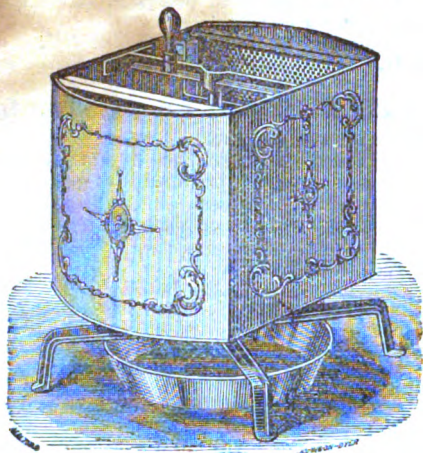
KINGSBURY & BILLINGSLEY,
No. 4 Journal Building,
Indianapolis, Ind.

THE MICHIGAN FARMER.

The only Agricultural paper published in Michigan. Terms, \$2 per annum.

JOHNSTONE & GIBBONS,
42 Larned street west,
Detroit, Mich.

THE PEABODY HONEY-EXTRACTOR



(Judging from the many flattering testimonials we have received from our patrons) is still taking the lead among the most prominent beekeepers of the country. Having permanently located at Bloomington, our facilities for shipping to all parts of the country are much better than formerly. Orders are already coming in larger than ever, and those who wish to secure a Machine for the coming season would do well to send early, as we may not be able to supply the demand. Send for our new Circular for 1872, and see what beekeepers say of our Machine.

Price of single Machine and two Knives, \$15 00
 Single Knife, by Express, 1 00
 " " " Mail, prepaid, 1 25

Address, J. L. PEABODY & CO.,
 Bloomington, Ill.

N. B. We have agencies in different parts of the country, and those ordering from a distance can have their Machines sent from the nearest point.



ITALIAN QUEEN BEES.

I expect to rear, for sale, this season, a limited number of

Choice Italian Queens,

bred when desired by purchasers, exclusively from imported queens, and fertilized if possible by drones from imported mothers.

The price of such queens, when fully tested, by examining their hatching brood in large nuclei or full stocks, will be ten dollars. If sent before they are tested, five dollars.

For further particulars, send for circular.

L. L. LANGSTROTH,

Feb. 1872—tf Oxford, Butler Co., Ohio.

BEAUTIFUL ITALIAN QUEEN BEES.

AT THE GYMNASIUM CANTONAL OF TESSIN, IN BELLINZONA, SWITZERLAND.

1. For an Italian Queen Bee, accompanied by a sufficient number of workers, and provision for a thirty days' journey packing included, and freight to Bremen, Hamburg, Havre, or Ostend, prepaid, if sent during April, 11 francs; during May, 10 francs; during June, 9 francs; during July, 8 francs; during August, 7 francs; during September, 6 francs, and during October, 5 francs.

2. Queens will be sent only in parcels of four, six, eight, twelve, or twenty-four.

3. All queens sent, to go at the risk of the party ordering them. Good and careful packing guaranteed.

4. The cash must accompany every order, or it will not be noticed. Address,

J. A. CHEVALLEY,

Professor at the Gymnasium Cantonal in Bellinzona, Canton of Tessin, Switzerland.
 Jan'y, 1872—tf

APIARIAN SUPPLIES.

Send for our circular of Queens, Full Colonies of Bees, Hives, Bee Books, Bee Veils, Queen Cages, &c., &c.

We furnish Hives of all the leading improved varieties, with or without bees.

Pure and Prolific Queens at reasonable rates. Circulars free. Address,

OWEN & LADD,
 Brentwood, Williamson Co.,

Feb., 1872—tf. Tenn.



